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POPULATION BULLETIN
Vol. 44, No. 3, November 1989

Africa's Expanding Population: Old Problems, New Policies

By Thomas J. Goliber

A publication of the
Population Reference Bureau, Inc.

Abstract—Sub-Saharan Africa faces an historic challenge: to achieve economic and social progress while experiencing extraordinary population growth. With an estimated 1989 population of 512 million, the 42 countries of sub-Saharan Africa have the highest birth and death rates of any major world region. While death rates have fallen since the 1960s, persistently high birth rates yield annual growth rates above 3 percent in many countries. The United Nations projects that the region's population will increase 2.7 times by 2025—to 1.4 billion.

Throughout the region, population has outstripped economic growth since the mid-1970s. In addition, many African countries are experiencing an epidemic of AIDS (Acquired Immune Deficiency Syndrome). The extent and demographic impact of the epidemic still are unknown, but disturbing social and political effects are already being felt.

The region's population growth will slow only when African couples begin to have fewer children. The average number of children per woman ranges from 6 to 8 for most countries. The Africans' preference for large families is deeply rooted in the culture and fed by the perceived economic benefits they receive from their children.

Economic stagnation during the 1980s prompted many national governments to recognize that rapid population growth was hindering their socioeconomic development. The political climate has shifted away from pronatalist or laissez-faire attitudes toward official policies to slow population growth. The policy formation process—detailed here for four countries (Zambia, Nigeria, Zaire, and Liberia)—is ponderous and beset with political and bureaucratic pitfalls. However, policy shifts in more and more countries combined with evidence of increased contraceptive use and fertility downturns in a few countries give some hope that the region's extraordinary population growth may have peaked and will start a descent. Whatever the case, the decade of the 1990s will be crucial for the future of sub-Saharan Africa.

Editor: Mary Mederios Kent
Assistant Editor: Kane Scarlett
Production Manager: Tracey A. Smith
Production Assistant: Martha Herr
Graphics: Type & Graphics, Inc.

The *Population Bulletin* is published four times a year and is distributed along with the other publications listed on the back cover to members of the Population Reference Bureau. If you would like to order additional copies of this *Bulletin* or join PRB, contact the Population Reference Bureau, Inc., Circulation Department, 777 14th Street, N.W., Washington, D.C. 20005; telephone: (202) 639-8040. Visa and MasterCard accepted. Annual PRB membership rates *inside the United States:* individuals, $45; educators, $30; students, $25; libraries/nonprofit organizations, $55; other organizations, $200. *Outside the United States:* individuals, $56; educators, $38; students, $28; libraries/nonprofit organizations, $68; other organizations, $250.

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The suggested citation, if you quote from this publication, is: Thomas J. Goliber, "Africa's Expanding Population: Old Problems, New Policies," *Population Bulletin,* Vol. 44, No. 3 (Washington, D.C.: Population Reference Bureau, Inc., November 1989). For permission to reproduce substantial portions from the *Population Bulletin,* write Population Reference Bureau, Inc., Permissions, 777 14th Street N.W., Washington, D.C. 20005.

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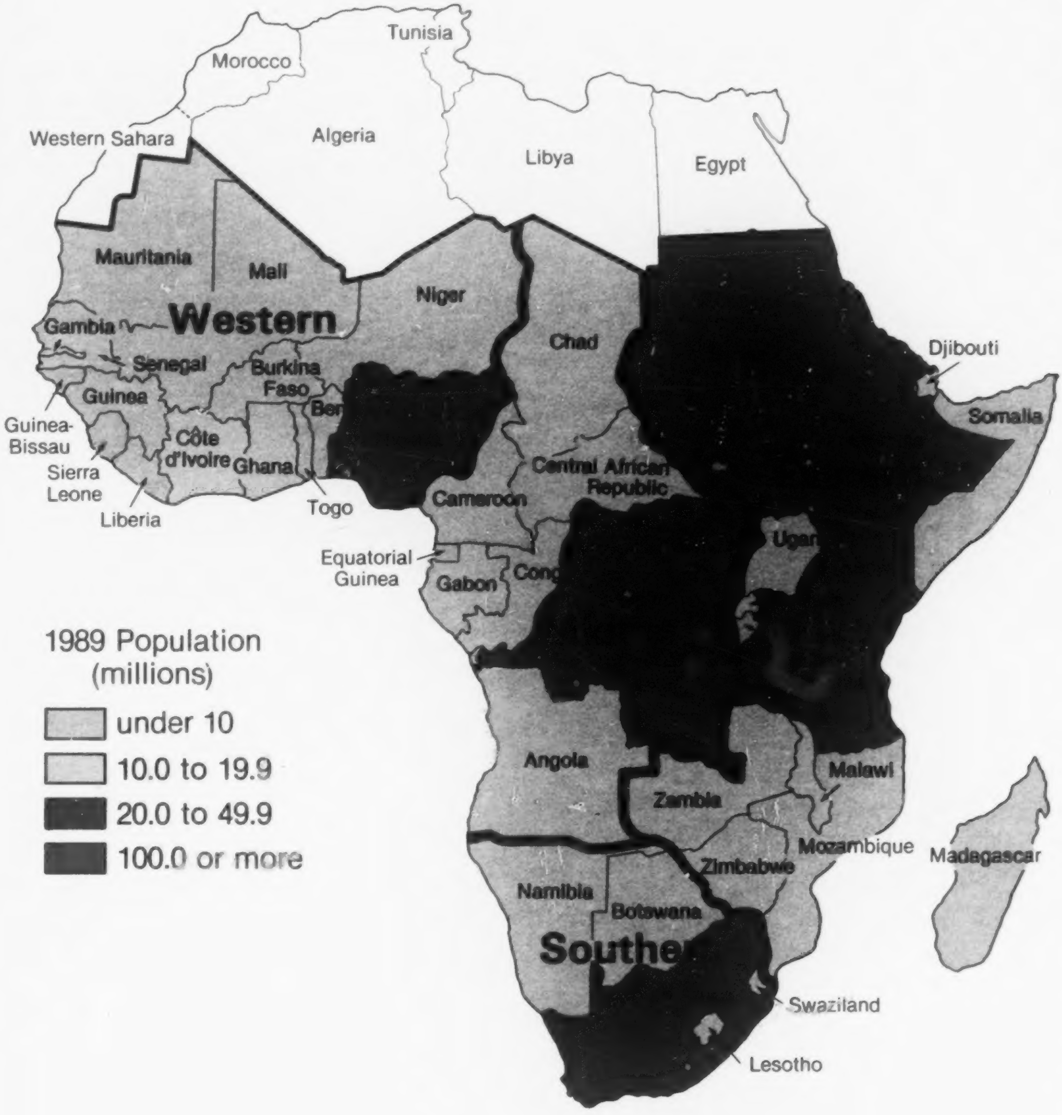
World Bank/Kay Muldoon

Figure 1. Sub-Saharan Africa


Tunisia
Morocco
Western Sahara
Algeria
Libya
Egypt
Mauritania
Mali
Niger
Chad
Western
Gambia
Senegal
Burkina Faso
Guinea
Guinea-Bissau
Sierra Leone
Liberia
Côte d'Ivoire
Ghana
Togo
Djibouti
Somalia
Central African Republic
Cameroon
Equatorial Guinea
Gabon
Angola
Zambia
Malawi
Mozambique
Madagascar
Zimbabwe
Namibia
Botswana
Southe
Swaziland
Lesotho
1989 Population (millions)
under 10
10.0 to 19.9
20.0 to 49.9
100.0 or more

Note: No countries fall in the 50-99 category. Nigeria's 1989 population is estimated to be 109 million, 21 percent of the region's total number.

Africa's Expanding Population: Old Problems, New Policies

By **Thomas J. Goliber**

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Dr. Goliber would like to thank his colleagues at The Futures Group, the U.S. Agency for International Development, Carolina Population Center, John Short and Associates, Population Reference Bureau, Research Triangle Institute, and the World Population Society for their assistance in preparing this Bulletin. *He is grateful to his numerous African friends and professional counterparts who have contributed so much to his views on population issues in sub-Saharan Africa.*

Author's note: This essay is a successor to a 1985 *Population Bulletin* entitled *Sub-Saharan Africa: Population Pressures on Development*. Some material is borrowed from the earlier work. This *Bulletin*, however, is more than an update of previous themes. Two changes in particular have contributed to a new environment for population policies and programs in sub-Saharan Africa. First, governments across the continent are considering or have adopted official population policies to reduce fertility and high rates of population growth. Second, the rapid spread of AIDS in parts of Africa has brought a new dimension to the population discussion. Nonetheless, one major theme remains consistent—the effort to develop Africa socially and economically in the face of extraordinary population growth is one of the greatest challenges of the modern world.

Sub-Saharan Africa faces an historic challenge. Never before have so many nations tried to modernize in the face of such extraordinary population growth. The combination of rapidly growing populations and stagnating economies has made the issue of population and development in sub-Saharan Africa one of the great unfolding dramas of our time.

Geographically vast, culturally diverse, the 42 nations of sub-Saharan Africa contained an estimated 512 million persons in 1989. The region's population is increasing by nearly 3 percent per year, faster than in any other region on earth, and growth rates may not peak until the 1990s. The United Nations projects that nearly a billion persons will be added to sub-Saharan Africa between 1980 and 2025. Africa's population is growing so rapidly because birth rates are collectively the world's highest and, unlike the rates in other developing regions, have fallen only slightly while death rates have fallen significantly, though they are still high by world standards.

Severe shortages of basic goods and services in many sub-Saharan nations, and bleak prospects for future economic growth add to Africa's dilemma. Indeed, the continent gained world attention in the 1980s through appeals for emergency food relief to stem hunger and famine across the region. The crises of the 1980s only reflect longer term trends.[1] With rapid population growth combined with degradation of arable and pasture land, political upheaval, and governments' failure to support agriculture adequately, per capita agricultural production has been falling since the 1960s. Because agriculture is the region's largest economic activity, this has hastened economic decline in an already impoverished region. After advancing by a healthy 3.7 percent between 1965 and 1973 (excluding South Africa), the gross national product (GNP) per capita in sub-Saharan Africa fell into a decline. By 1987, GNP per capita was well below its 1970 level.[2]

Africa–South of the Sahara

Sub-Saharan Africa covers about 20 percent of the earth's land surface, and, in the late 1980s, contained approximately 10 percent of the world's population (see Figure 1).

The population is diverse, with more than 800 ethnic groups speaking 1,000 different languages or dialects. In many cases, national boundaries do not correspond to the geographic distribution of major ethnic groups, creating serious political problems. Often, English, French, or Portuguese—the languages of the former European colonial powers—have been adopted as official languages and used in the schools and governments.

Economic situations are also diverse. Only about 13 percent of the region's population lives in the low-income, semiarid and resource-poor nations such as Chad, Somalia or Rwanda. Over 60 percent live in countries such as Nigeria, Ghana, Sudan, Uganda, Zaire, and Zambia which have a resource base on which to build the development effort. Even in the resource-rich nations, however, economies have been sluggish, placing them among the poorest countries in the world.[3]

Sub-Saharan Africa includes a number of relatively small countries, partly a reflection of the historical ethnic diversity of the region, but also a legacy of the European "scramble" to establish African colonies in the 19th century. All but Ethiopia and Liberia are former European colonies which have only gained independence since World War II. Only 7 of the 42 sub-Saharan nations (including Madagascar but excluding the six smaller island nations—Cape Verde, Comoros, Mauritius, Reunion, Seychelles, Sao Tome and Principe), had 1989 populations greater than 20 million persons, according to UN estimates (see Table 1). Over 20 percent of the sub-Saharan population lives in one country, Nigeria, which had an estimated 1989 population of 109 million. Nearly 40 percent live in one of the other six relatively populous nations: Ethiopia (45.7 million), South Africa (34.5 million), Zaire (34.9 million), Tanzania (26.3 million), Sudan (24.5 million), and Kenya (24.1 million). By contrast, 17 countries contained fewer than 5 million inhabitants in 1989.

The economic and social setting of the region is still largely traditional. Most of the population lives in rural areas, eking out a living through subsistence farming. Illiteracy is widespread; death and sickness rates are high; women marry early; polygyny is common; families are large. Poverty is endemic, and it has worsened in recent years. During the 1980s, gross national product (GNP) per capita fell throughout the region as high rates of population increase have outstripped economic growth.[4]

Rapid Population Growth

From the limited data available, the United Nations judges that death rates have fallen slowly in recent decades while birth rates have remained high or even risen. As a result, natural increase—birth rates minus death rates—has mounted each decade. The region's natural increase averaged 2.6 percent a year in the 1960s, 2.9 percent in the 1970s, and in the late-1980s, about 3.0 percent a year—a rate that, if continued, would double the region's population in 22 years.[5] In contrast, in Asia, natural increase averaged about 1.9 percent a year in 1989, or 2.2 percent if China is excluded.[6] In Latin America, the 1989 average rate of natural increase was about 2.1 percent.

Table 1. Population and Vital Rates, Sub-Saharan Africa, 1989

	Population		Birth rate	Death rate	Natural increase (percent annually)	Infant mortality rate[a]	Life expectancy at birth (years)	Total fertility rate[b]
	Estimated 1989 (millions)	Projected 2025 (millions)	(per 1,000 population)					
Sub-Saharan Africa	**512.0**	**1362.0**	**47**	**17**	**2.9**	**112**	**51**	**6.6**
Western Africa	**193.1**	**525.3**	**49**	**16**	**3.2**	**112**	**49**	**6.8**
Benin	4.6	13.0	51	19	3.2	110	47	7.0
Burkina Faso	8.8	22.7	47	19	2.9	138	47	6.5
Côte d'Ivoire	12.1	39.8	51	14	3.7	96	53	7.4
Gambia	0.8	1.9	47	21	2.6	143	43	6.4
Ghana	14.6	37.0	44	13	3.1	90	54	6.4
Guinea	6.7	15.7	47	22	2.5	147	42	6.2
Guinea-Bissau	1.0	2.2	41	20	2.1	132	45	5.4
Liberia	2.5	7.2	45	13	3.2	87	55	6.5
Mali	9.1	24.1	50	21	2.9	169	44	6.7
Mauritania	2.0	5.0	46	19	2.7	127	46	6.5
Niger	6.9	18.9	51	21	3.0	135	45	7.1
Nigeria	109.2	301.3	50	16	3.4	105	51	7.0
Senegal	7.2	16.4	46	19	2.7	128	46	6.4
Sierra Leone	4.0	9.6	48	23	2.5	154	41	6.5
Togo	3.3	9.5	45	14	3.1	94	53	6.1
Middle Africa	**67.5**	**179.6**	**45**	**16**	**2.9**	**107**	**50**	**6.0**
Angola	9.7	24.7	47	20	2.7	137	45	6.4
Cameroon	11.0	26.2	42	16	2.6	94	51	5.8
Central African Rep.	2.8	6.8	44	20	2.5	132	46	5.9
Chad	5.5	13.2	44	20	2.5	132	46	5.9
Congo	1.9	5.0	44	17	2.7	73	49	6.0
Equatorial Guinea	0.4	1.0	42	19	2.3	127	47	5.7
Gabon	1.1	2.9	39	16	2.2	103	52	5.0
Zaire	34.9	99.5	46	14	3.2	98	53	6.1
Southern Africa	**40.0**	**78.0**	**33**	**10**	**2.3**	**77**	**60**	**4.7**
Botswana	1.2	3.4	47	12	3.6	67	59	6.3
Lesotho	1.7	4.3	41	12	2.8	100	56	5.8
Namibia	1.8	4.9	44	12	3.2	106	56	6.1
South Africa	34.5	63.2	32	10	2.2	72	60	4.5
Swaziland	0.8	2.2	47	13	3.4	118	56	6.5
Eastern Africa	**211.6**	**580.2**	**47**	**20**	**2.7**	**115**	**50**	**6.7**
Burundi	5.3	13.1	46	17	2.9	112	49	6.3
Djibouti	0.4	1.1	47	18	3.0	122	47	6.6
Ethiopia	45.7	112.3	44	24	2.0	154	41	6.2
Kenya	24.1	77.6	54	12	4.2	72	58	8.1
Madagascar	11.6	33.0	46	14	3.2	120	54	6.6
Malawi	8.2	22.8	53	20	3.3	150	47	7.0
Mozambique	15.2	34.4	45	19	2.7	141	47	6.4
Rwanda	7.0	18.1	51	17	3.4	122	49	8.3
Somalia	7.3	18.9	51	20	3.1	132	45	6.6
Sudan	24.5	59.6	45	16	2.9	108	50	6.4
Tanzania	26.3	84.8	51	14	3.7	106	53	7.1
Uganda	17.8	55.2	50	15	3.5	103	51	6.9
Zambia	8.1	25.5	51	14	3.7	80	53	7.2
Zimbabwe	9.4	22.6	42	10	3.2	72	58	5.8

[a] Infant Mortality Rate = Annual deaths to children under one year per 1,000 births

[b] Total Fertility Rate (TFR) = Average number of children women would have by age 49 at the current age-specific birth rates. These rates are UN estimates. Recent Demographic and Health Surveys have recorded different TFRs in Botswana (5.0), Burundi (7.0), Kenya (6.7), Swaziland (5.2), Uganda (7.3), and Zimbabwe (5.7), among other countries.

Source: United Nations, *World Population Prospects 1988* (New York: 1989).

As we enter the 1990s, sub-Saharan Africa has the highest birth rates of any major world region. In Western Africa, the birth rate was an estimated 49 per 1,000 population and the total fertility rate—the average number of lifetime births per woman at current age-specific fertility rates—was 6.8 births per woman. Among the most populous Eastern African countries, the estimated birth rate was 44 in Ethiopia, 54 in Kenya, 45 in Sudan, and 51 in Tanzania. In Middle Africa, dominated by Zaire, the overall birth rate was 45 and the total fertility rate (TFR) 6.0 in 1989. Birth rates are markedly lower in the southern part of the continent, largely due to South Africa. South Africa's birth rate of 32 and total fertility rate of 4.5 were the lowest in the region (outside the island nations of Mauritius, Reunion, and the Seychelles).

There are two geographic belts of especially high fertility. One, in the eastern part of the continent, extends from southeastern Sudan southward into parts of Kenya and Uganda, continues through Rwanda, Burundi and part of Tanzania, then into regions of Zaire, Zambia, Zimbabwe and Mozambique. The other extends along the coast of Western Africa from the southern part of Nigeria to Côte d'Ivoire and northward through western Nigeria into parts of Niger and Burkina Faso.[7]

There is also a well-known band of persistently high subfecundity and infertility running across central Africa, due to high prevalence of such diseases as genital tuberculosis and especially gonorrhea. From 14 to 32 percent of women are childless at the end of their childbearing years in Cameroon, Central African Republic, Congo, Gabon, and regions of Zaire and Zambia, keeping birth rates below what they might otherwise be.

Average life expectancy for Africans is among the world's lowest. Estimated life expectancy at birth in 1989 was still below 50 years in just over half the countries of the region and only modestly above 50 in several others (see Table 1).

Nonetheless, the region's life expectancy has actually increased steadily since the 1950s, with the elimination of smallpox, for example, better control of epidemic diseases like yellow fever and malaria, and other medical and health improvements. Between 1950 and 1989, according to UN estimates, life expectancy rose from 37 to about 51 years in Cameroon and from 41 to about 58 years in Kenya.[8]

By 1989, with high birth rates combined with declining death rates, natural increase was about 3.2 percent a year in Western Africa, 2.7 percent in Eastern Africa, 2.9 percent in Middle Africa, and 2.3 percent in Southern Africa (see Table 1). Because death rates are expected to fall further, the UN projects a rise in natural increase in the 1990s in many African countries.

Youthful Population, Future Growth

The population of sub-Saharan Africa is extremely young, a result of the long history of high birth rates and, to a lesser extent, the more recent declines in infant and child mortality. According to UN estimates, at least 45 percent of the population is under age 15 in most African countries. Only in Gabon and South Africa is the percent under 15 less than 40. By contrast, 38 percent of the Latin American population, and 21 percent of the United States population is under age 15. In Ghana, typical of the region, an estimated 47 percent of its 1989 population was younger than age 15. In Kenya and Zambia a majority of residents are under age 15.

The youthful age structure constitutes an economic burden because an exceptionally large share of development resources must go to meet the immediate needs of the young. Education, for example, commands 20 to 25 percent of government expenditures in many African countries.[9]

The large proportion of children create a built-in momentum for future population growth. Even if fertility immediately drops to the "replacement" level of a little over two births per woman, births would still outstrip deaths and population would continue to grow for at least 50 years. If replacement level fertility were attained immediately, the region's national populations would still grow by another 80 to 100 percent through the momentum built into their youthful age structures.

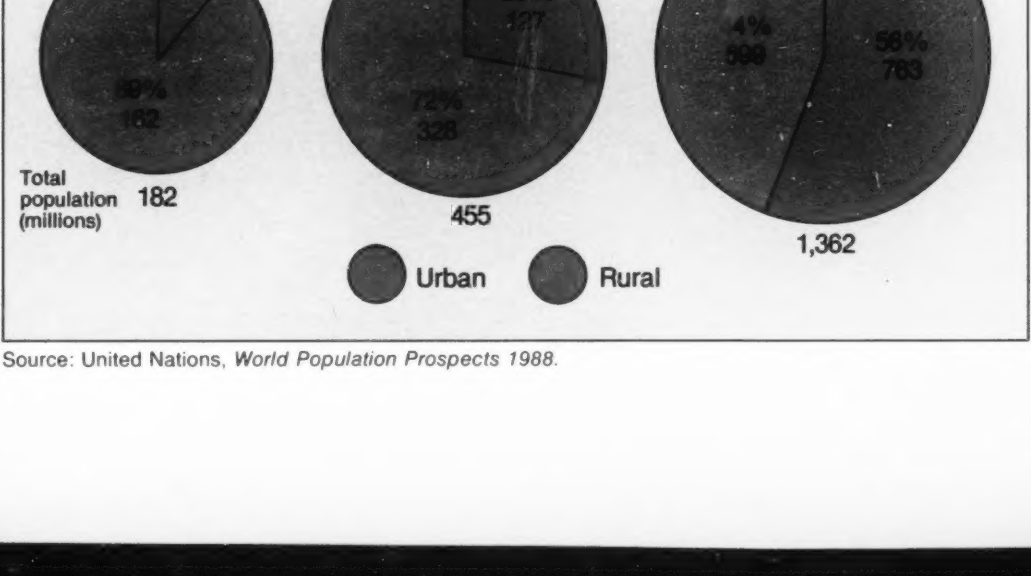
In reality, of course, reduction of present high fertility to replacement level will take many decades and national populations will continue growing for many more decades after that due to the built-in momentum. Barring extraordinary catastrophe, population growth will clearly be characteristic of Africa for at least the next century and probably beyond.

The UN projects that the sub-Saharan region will grow from 512 million persons in 1989 to 840 million in 2005 following the medium projection series. By 2025, the region's population could reach 1.4 billion. The medium projection series assumes that the region's total fertility rate will decline from 6.5 children per woman in 1985 to 5.5 in 2005 and 3.2 in 2025.

In the UN's high series, which assumes a slower fertility decline, to 6.0 children per woman in 2005 and 4.2 in 2025, the region's population reaches 885 million in 2005 and nears 1.6 billion by 2025. The UN low projection assumes a rapid fertility drop, to 4.7 children per woman in 2005 and 2.5 in 2025. Even here, the population reaches 813 million in 2005 and 1.2 billion in 2025.

Projected population increases for individual countries are even more dramatic. In the medium projections, Zaire's population grows from 34.9 million in 1989 to 57.8 million in 2005 and 99.5 million in 2025. Nigeria's population is projected to grow from an estimated 109.2 million in 1989 to 186.9 million in 2005 and to 301.3 million in 2025 according to the UN.

Figure 2. Urban Growth in Sub-Saharan Africa, 1950, 1985, and 2025



Source: United Nations, *World Population Prospects 1988.*

Migration and Settlement Patterns

Moving to the Cities

The African population is distinctively rural. Only in the tiny nations of Djibouti and Equatorial Guinea, relatively prosperous South Africa, and Namibia do a majority of the population live in cities. But the region has been urbanizing at dizzying speed—fueled by a constant stream of migrants from the countryside as well as the high rate of natural increase in the cities themselves. The UN estimates that the overall urban population of the region increased six-fold between 1950 and 1985, from 20 million to 127 million. By 2025, the urban population could reach 763 million. The urban dwellers, only 11 percent of the 1950 population, now make up about 28 percent of the region's population and could reach 56 percent by 2025 (see Figure 2).

The number of cities with more than 500,000 inhabitants has also risen but in many countries, especially the smaller nations, a single, dominant metropolitan area—or primate city—has emerged. In

Table 2. Refugee Populations in Sub-Saharan Africa, Estimates for 1988

Asylum countries	Number of refugees	Source countries
Ethiopia	700,000	Somalia, Sudan
Sudan	693,000	Ethiopia, Chad, Uganda, Zaire
Malawi	630,000	Mozambique
Somalia	365,000	Ethiopia
Zaire	325,700	Angola, South Africa, Burundi, Rwanda
Tanzania	266,200	Burundi, Mozambique, Rwanda, Zaire
South Africa	180,000	Mozambique
Zimbabwe	171,500	Mozambique, South Africa
Zambia	149,000	Angola, Mozambique, Namibia, South Africa, Zaire
Uganda	125,500	Rwanda, Sudan, Zaire
Angola	95,700	Namibia, South Africa, Zaire
Burundi	76,000	Rwanda, Zaire, Uganda
Swaziland	70,700	Mozambique, South Africa
Rwanda	20,600	Burundi
Kenya	10,600	Ethiopia, Rwanda, Uganda
Source Countries		**Asylum Countries (Primary)**
Mozambique	1,147,000	Malawi, South Africa, Zimbabwe, Tanzania, Swaziland, Zamiba
Ethiopia	1,029,200	Sudan, Somalia, Kenya, Djibouti
Angola	395,700	Zaire, Zambia
Sudan	355,000	Ethiopia, Uganda
Somalia	350,000	Ethiopia
Rwanda	217,800	Uganda, Burundi, Tanzania, Zaire
Burundi	186,600	Tanzania, Rwanda, Zaire
Namibia	81,400	Angola, Zambia
Zaire	53,000	Angola, Burundi, Tanzania, Zambia, Sudan
Chad	41,300	Sudan, Cameroon, Nigeria, Benin, Central African Rep. Congo
South Africa	24,900	Angola, Swaziland, Lesotho, Zambia, Botswana, Zimbabwe

Source: U.S. Committee for Refugees, *World Refugee Survey—1988 In Review* (Washington, D.C.: American Council for Nationalities, 1989) pp. 32-34.

1985, 46 percent of Liberia's urban population lived in the country's largest city and capital, Monrovia. In Ghana, about 32 percent of the urban population lived in the Accra urban agglomeration. At the same time, 66 percent of Angola's urban population could be found in Luanda, all of Burundi's resided in Bujumbura, and about 32 percent of Malawi's urban population lived in Lilongwe, despite the newness of the city.

International Labor Migration

Africans have long been a migratory people. Swaziland and Lesotho were founded by Swazis and Basothos fleeing Zulu tribesmen. In the 19th century, Tanzania was settled by Bantu people from other parts of the continent. In recent decades, most international migration has been in search of better jobs—in the mines of South Africa, the hotels and factories of Nigeria, on the cocoa farms of Côte d'Ivoire. The major sending countries tend to be among the poorer, often landlocked countries of the African hinterland. Côte d'Ivoire, the most prosperous of the West African coastal states, Gabon and Zaire, Central African states with rich mineral resources and active mining sectors, and the Republic of South Africa, with its almost developed economy and great need for labor in the mines, are the major receiving nations. Sudan sends large numbers of workers to the oil-rich states of the Middle East.

The magnitude of such labor movements can be impressive. In the late 1980s, 51 percent of Lesotho's adult males were working in the mines of South Africa, a stark demonstration of virtual economic dependency on South Africa.

Refugee Movements

In addition to the labor migration, millions of Africans have been forced to flee their homelands in recent decades. Ethiopia and Mozambique, suffering from civil war and economic devastation, are the source of most of the region's refugees. By 1988, more than a million refugees from each of those two countries were living in other parts of the continent, according to estimates compiled by the UN (see Table 2). The countries that have received the most refugees are Sudan, with some 700,000 (mostly from northern Ethiopia), Ethiopia itself with about the same number from Somalia and southern Sudan, and little Malawi where about 630,000 Mozambicans, fleeing their war-torn country, have taken refuge. Overall by 1988, Africa had about 4 million refugees counted by the UN and undoubtedly hundreds of thousands more that do not show up in the fragmented official statistics.

In addition, several million Africans have been forced to move within their own countries because of military action or civil unrest. Statistics on this internally displaced population are even more elusive.

UNHCR/A. Hollmann

A refugee family from Mozambique finds temporary shelter in a refugee camp in Zimbabwe.

Rural Settlements

Over two-thirds of the population of sub-Saharan Africa lives in rural areas. The vast majority of these rural residents live in one of two distinct residential patterns. In the first pattern, common in much of Western Africa, people live in a central village and go out each day to work in surrounding fields. The other is a system of independent "smallholdings" scattered about the countryside, each occupied by a single, sometimes extended, family. The second pattern, characteristic of Burundi, Rwanda, and other East African nations, can hinder national development efforts because it is difficult to provide education, health, agricultural, and other services to a dispersed population.

Population Growth and Development

The social and economic development of sub-Saharan Africa is being hampered by the region's rapid population growth. Most visibly it constrains efforts to raise overall living standards, feed people adequately, preserve the land base essential for future development, catch up with the demand for jobs, education and health services, and cope with exploding cities.

Losses in GNP per capita

A high rate of economic growth does not necessarily mean widespread improvement in living standards, especially where national incomes are distributed unequally. On the other hand, when the population is growing faster than the economy, improvements in living standards are highly unlikely.

Most of the sub-Saharan region has witnessed a decade and a half of economic stagnation and declining living standards. Exclusive of South Africa, GNP per capita increased by a healthy average of 3.7 percent each year between 1965 and 1973. However, GNP per capita grew by only 0.7 percent per year between 1973 and 1980, and much of that growth was due to the oil boom in Nigeria. Except for 1985, the per capita GNP in the region declined every year between 1980 and 1987.[10]

Declining per capita Food Production

In sub-Saharan Africa in the early 1980s, hundreds of thousands died, and hundreds of thousands more suffered from severe malnutrition caused by one of the worst droughts in history. The rains returned in 1985 and 1986, but in some countries the rains brought an invasion of crop-damaging locusts.

In the 1960s, agricultural production kept pace with population growth. Since then, the region has become the only one in the world where food production is losing the race with population growth. During the 1970s, per capita food production fell by close to 1 percent per year. Then between 1981 and 1984, per capita food production plunged by 10 percent. Since then production has increased, but remains inadequate.

Several factors other than drought and rapid population growth have contributed to the food crisis in Africa. Frequently government policies depress food production rather than encourage it. Price controls have usually worked to the benefit of urban consumers and the detriment of rural producers. Heavy taxation on cash crops—coffee, tea, tobacco, and the like—along with mandatory marketing through government-controlled marketing boards have greatly restricted the growers' profits.[11] Political and military conflict—in southern Sudan, Somalia, Ethiopia, Mozambique, and elsewhere—have seriously disrupted farming. Tradition-bound agricultural practices, shortened fallow periods, and serious land degradation have also combined to keep productivity low.

Africa's main source of hope is that it is land rich. What little gain has taken place in agricultural production over the past 15 years has come mostly from increasing the amount of land under production, while yields per hectare have leveled off or declined.[12] A UN Food and Agriculture Organization (FAO) study in 1982, concluded that even using subsistence farming methods (no fertilizers or pesticides, traditional seed varieties, and no conservation efforts), enough cultivable land exists to feed indefinitely a population of about 940 million.[13]

However, on a country-by-country basis, the situation is less optimistic. The distribution of good land in Africa does not correspond to the distribution of people. In 1975, 14 countries—with about one-third the land area and one-half the entire sub-Saharan population—already were unable to maintain food sufficiency using subsistence-level farming methods. Many nations cannot afford the massive investments required to put new lands into production. If Africa is to increase food production enough to keep up with population growth, it would have to experience sustained growth in food production of about 3.5 percent per year, a growth record which has been accomplished by only a few countries in the world.[14]

Declining Land Quality

The region's expanding population has contributed to deforestation and desertification, undermining the ability of African nations to achieve sustainable development. Sustainable development provides for basic needs while at the same time preserving the long-term productive capability of the resource base. In present day Africa, the slow destruction of this resource base fundamentally threatens long-term sustainable development.

Forests are being depleted at a disturbing rate due to uncontrolled cutting, mostly for wood to be used for household fuel, and encroachment of farm settlements onto forest land. Some experts put deforestation at 50 acres a minute, and already at least 18 sub-Saharan African countries are facing acute shortages of fuelwood.[15] Deforestation contributes to

FAO/F. Botts

A West African clears an irrigation canal. Many African nations face a decline in per capita food production.

soil erosion, both because the soil is exposed and because crop and animal wastes formerly used as fertilizers are burned for fuel in place of wood.

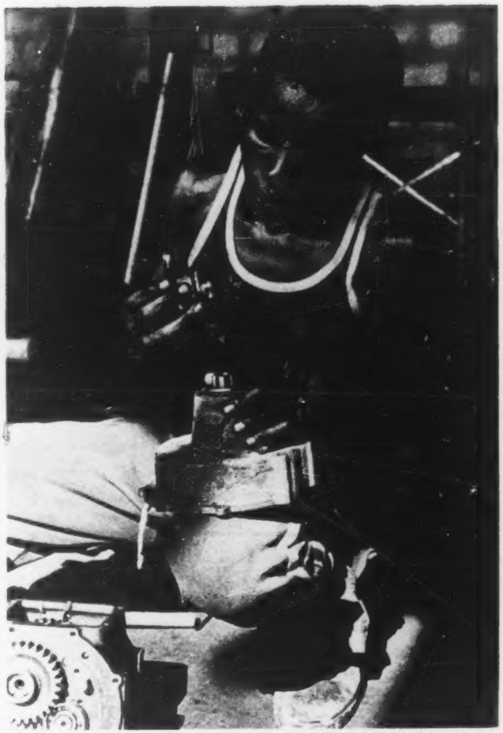
Deforestation—which allows wind to strip the land bare of topsoil—is one of the factors in the relentless desertification taking place in Africa, especially in the Sahel region bordering the Sahara Desert. But overgrazing is also important in this loss of at least marginally useful land to permanent desert. The UN Environment Programme estimates that overgrazing, along with deforestation and poor farming practices, is turning 24,000 square miles of African land into desert each year.[16]

Labor Surplus

The imbalance between available jobs and workers is one of the most fundamental development issues facing Africa. The International Labor Office (ILO) projections indicate that the labor force* of the 42 sub-Saharan African countries is likely to grow from 186 million in 1985 to 368 million in 2010, and 574 million in 2025.[17]

Africa already has a labor surplus, indicated by widespread underemployment and unemployment. The Economic Commission for Africa estimated in 1983 that 40 percent of sub-Saharan Africa's entire labor force, about 64 million workers, was affected by rural underemployment.[18] By 2008, 71 percent of the rural labor force could be underemployed, according to these projections. At the same time, there are shortages of seasonal and highly skilled workers in some areas.

Many African nations strived to achieve universal primary school enrollment after independence. Ironically, the improvements in educational attainment have only aggravated the labor situation. Among Africans, education is seen as the path to a better job. During the colonial era this was true: those fortunate enough to receive a primary school education could count on jobs as clerks or assistants in businesses or government. It was widely accepted that primary school "leavers" (graduates) had access, even a right, to jobs in the modern sector of the economy.



UNHCR/H. Gloaguen

A South African refugee in Swaziland learns a new trade. Workers with some skills are in short supply.

In the 1980s, there are more primary-educated Africans than the labor market can absorb, but this has not discouraged Africans' thirst for education. On the contrary, the demand for education appears to increase as employment prospects worsen. Education is seen as the escape from the tedium and poverty of traditional rural life. Obtaining a modern job is not assured, but the rewards are large for those who do. Those who fail are forced into informal jobs in the cities or back into traditional, often subsistence-level, jobs in the countryside. The frustrated aspirations of huge numbers of young people who cannot find jobs after they leave school eventually may escalate social and political demands.

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*The labor force includes all men and women aged 15-64 who are working or looking for work. "Labor force participation" is a developed-country concept difficult to apply to the rural economies of sub-Saharan Africa. However, projections illustrate the tremendous future demand for new jobs.

Education

African governments made strong financial and policy commitments to education after independence. Primary school enrollments increased impressively as a result.

This educational progress began to falter in the 1980s as education had to compete with other investments for its share of a shrinking pool of government funds. Between 1972 and 1987, the proportion of central government expenditures devoted to education fell from 15.8 to 10.8 percent in Malawi; from 19.0 to 8.3 percent in Zambia; and from 22.4 to 15.5 percent in Lesotho. Net primary enrollment rates (the percentage of school-aged children actually enrolled) have fallen in some countries. In Tanzania, the rate fell from 60 to 52 percent between 1983 and 1986; in Somalia, it fell from 25 to 14 percent between 1980 and 1985.[19]

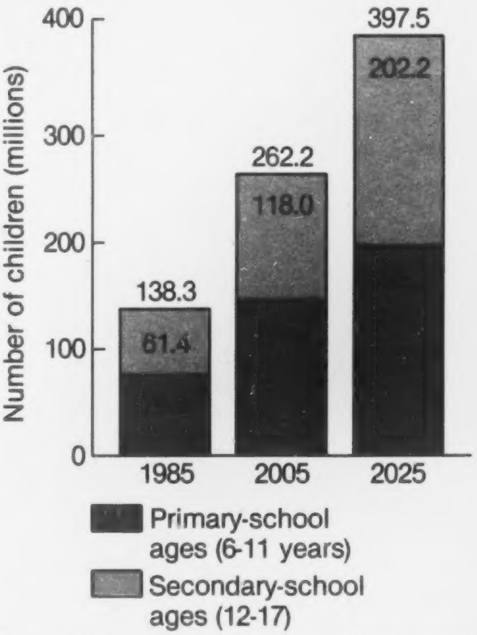
The goal of universal primary school enrollment will become more elusive as the numbers of primary-school-aged children escalate in the coming decades. The UN medium projections for the region show the number of children aged 6-11 increasing from 76.9 million in 1985 to 144.2 million in 2005 and 195.3 million in 2025 (see Figure 3).

Enrollments in secondary school have made more modest gains. In 1985, secondary students comprised only 20 percent of the population aged 13-18 in the Sudan, 12 percent in Ethiopia, and 5 percent in Burkina Faso. University education is available only to an even more privileged elite. Besides shortages of qualified teachers and facilities, higher education enrollments are kept low because of the scarcity of suitable jobs for these graduates in present-day sub-Saharan Africa.

Girls are still much less likely than boys to have access to schooling, but their enrollment rates have also soared since independence. Between 1970 and the mid-1980s the percentage of primary-aged girls enrolled in school rose from 7 to 22 percent in Burkina Faso, 33 to 40 percent in the Central African Republic, 14 to 53 percent in Gambia, and from 65 to 88 percent in Swaziland (see Table 3). However, in Mali, Lesotho, and a few others, net enrollment of girls dropped or remained constant.

In other parts of the world, increases in female education have been associated with a preference for smaller families and lower birth rates. In sub-Saharan Africa, however, few women stay in school more than a few years, apparently not enough to overcome the strong cultural bias toward large families. As educational levels continue to increase with succeeding generations, it is very likely fertility will eventually begin to fall.

Figure 3. Projected Growth of School-Age Children, Sub-Saharan Africa, 1985 to 2025



Source: United Nations, *World Population Prospects 1988.*

Table 3. Improvements in Primary School Enrollments, Sub-Saharan Africa, 1970s, 1980s

		Percent of primary-school-aged children enrolled in school			
		Around 1970		Around 1985	
Country	Year	Male	Female	Male	Female
Western Africa					
Burkina Faso	1970/1986	12	7	38	22
Gambia	1970/1985	30	14	84	53
Guinea-Bissau	1975/1984	36	32	71	35
Mali	1970/1984	20	12	19	11
Niger	1973/1985	17	9	35	19
Togo	1970/1986	77	35	88	58
Eastern Africa					
Kenya	1975/1980	86	79	88	84
Malawi	1973/1985	41	31	48	43
Mozambique	1972/1986	53	28	52	44
Rwanda	1973/1986	61	51	65	63
Somalia	1975/1985	25	17	19	10
Tanzania	1975/1986	53		51	53
Zambia	1976/1984	88	78	89	85
Zimbabwe	1986	—	—	100	100
Middle Africa					
Central African Republic	1970/1986	64	33	63	40
Zaire	1970/1983	79	51	86	65
Southern Africa					
Botswana	1973/1986	47	56	85	93
Lesotho	1970/1984	56	87	62	82
Swaziland	1970/1987	64	65	84	88

Source: UNESCO, 1988 and 1978-1979 *Yearbooks.*

Inadequate Health Systems

The average life expectancy for sub-Saharan Africans in the late 1980s was only 51 years. High infant and child mortality are the primary reason for the region's extremely low life expectancy. Deaths to infants under age one average more than 100 per 1,000 live births in 30 of the 42 sub-Saharan nations. By contrast, infant mortality rates in the United States, Canada, and Western Europe usually range between 7 and 10 infant deaths per 1,000 births. In many sub-Saharan African countries, deaths to children under age five make up more than half the total of annual deaths; in developed countries their share is 1 to 3 percent.[20] Maternal mortality rates are also high: 2 to 6 deaths per 1,000 live births—100 to 500 times the rates in developed countries.

The chief causes of illness and death are infectious diseases such as tuberculosis, malaria, measles, onchocerciasis (river blindness), trypanosomiasis (sleeping sickness), and tetanus; intestinal infestations like hookworm; and, among infants and children especially, diarrhea and consequent dehydration, and malnutrition.[21]

Better diets, better sanitary practices, and better health care could potentially bring death rates plummeting. UNICEF

(United Nations Children's Fund) began a campaign in 1982 for four basic low-cost measures that could halve child death rates in developing countries: oral rehydration therapy, a simple treatment to stop diarrheal dehydration; immunization against six major childhood diseases (known as EPI or Expanded Programme of Immunization); breast-feeding for at least six months and better weaning practices; and growth monitoring to enable mothers to detect malnutrition early. Child survival programs are now a keystone of international assistance in Africa.

The statistics suggest that health services have improved in most sub-Saharan African countries since independence. But most health professionals, hospitals, and other health facilities are located in urban centers, while most of the population lives in rural areas. Most Africans have very little access to modern health care.

Rapid population growth hampers the improvements in health and the delivery of health services in at least three ways. First, combined with economic stagnation, it is difficult to maintain, not to mention, upgrade services for growing numbers of people. Second, high birth rates create a high proportion of young children in the population—the group with the highest illness and mortality rates in developing countries and hence the greatest need for health services. Third, high fertility and closely spaced births are associated with high rates of maternal and child mortality.[22]

UNHCR/A. Hollmann

A woman and child visit a health clinic in Zambia. Most Africans have little access to health care.

Urban Crowding

Rapid urbanization has been characteristic of the region. In Nigeria, for example, the United Nations estimates that the number of urban dwellers increased nearly seven-fold between 1950 and 1980, from 3.3 to 21.8 million, and is projected to reach 68.9 million by 2000.

African cities are "plagued by the adverse effects of rapid growth—urban sprawl, unemployment, delinquency, inadequate social services, traffic congestion and poor housing," reads a statement from the Second African Population Conference, convened in Tanzania, January 1984. Some governments—Nigeria, Kenya and others — have adopted policies to slow or redirect this explosive urban growth. Such policies have not proved effective and are not a realistic alternative to dealing with the fundamental causes of rapid urbanization.

For millions of rural Africans, the possibility of a better life in the cities is an irresistible magnet. The fortunate few who find jobs in industry, business, or government earn incomes many times higher than they would in rural areas. Cities also claim the greatest share of modern social services—schools, health facilities, potable water, entertainment. Despite the squalor, lack of housing, pollution, congestion, and physical danger, urban centers still offer a glimmer of hope for a brighter future.

Demographic surveys in the late 1980s show that urban women in sub-Saharan Africa have fewer children than rural women, although urban fertility is still high. In Liberia, the total fertility rate for urban areas was 5.9, compared to 6.6 in rural areas. In Mali, the urban rate was 6.1, compared to a rural rate of 7.0.

Eventually, continued urbanization is likely to contribute to lower national birth rates.

An Emerging Crisis: AIDS

As if the current development crisis of Africa were not already desperate enough, levels of Acquired Immune Deficiency Syndrome (AIDS) in many sub-Saharan countries are among the highest in the world.

HIV Infection

AIDS is caused by a virus, known as the human immunodeficiency virus or HIV. This virus weakens the body's immune systems, rendering them unable to fight sickness, eventually leading to death. AIDS is usually transmitted sexually, though it may also be transferred through contaminated blood, unsterile needles, and from mother to unborn child or infant. However, several years, eight or nine on average, may pass before an HIV-infected person actually develops the disease. Although AIDS has not been studied long enough to know for certain, it is thought that at least 75 percent of those with HIV infection will contract AIDS. Among those who develop the disease, the fatality rate may reach 100 percent. Most AIDS victims die within two or three years.[23]

A graph of the AIDS population looks something like an iceberg. Those who have the disease are the part of the iceberg above the water. But the much larger and deadlier part of the iceberg is composed of those who are HIV infected but who have not yet developed the disease. This concept is important to grasp because the number of estimated AIDS cases in African countries (about 100,000 by mid-1988) appears surprisingly low for the publicity given the issue. What must be kept in mind is that the number of cases possibly represents 5 percent or less of those who are already HIV infected and that the number of persons infected is increasing rapidly.

Origins

In truth, not much is known about the origins of the AIDS virus; nonetheless, the origins issue is politically contentious in Africa. African health and political leaders often feel that Africa is being held responsible for starting the worldwide AIDS epidemic. Indeed, some observers have suggested that the high prevalence of AIDS in central Africa is strong evidence that the disease originated there. When African green monkeys were found to carry a similar virus, some researchers thought that the source of the disease had been found. Subsequent research has indicated that the green monkey virus is probably a cousin to the HIV virus, rather than a direct antecedent.

In seeking to place the origins of AIDS in Africa, other scientists observe that research into special case histories and frozen blood samples show the disease already present in Africa in the 1960s. Some evidence shows the virus present in North America in the late 1960s as well.[24] The uncertainty of the actual origins of the AIDS virus is underscored by a 1987 World Health Assembly statement that HIV is a "naturally occurring retrovirus of undetermined geographic origin."[25]

AFRICA REPORT magazine quotes Dr. Gottlieb Monekosso, director of the World Health Organization's office in Brazzaville, on the uselessness of the debate: "When a fire is burning in your

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Note: This discussion pertains to HIV-1, which is the virus responsible for most AIDS both in Africa and throughout the world. However, a second, distinct AIDS virus, known as HIV-2, has also been discovered, primarily in West African cities. Prevalence rates for HIV-2 in West African cities are several times lower than the corresponding rates for HIV-1 in East African urban areas. Some inconclusive evidence suggests that HIV-2 may be less deadly than HIV-1.[26]

house, it's not the time to start asking who lit the match or who was smoking the cigarette."[27] However, Dr. Fred Sai, a native of Ghana, currently Senior Population Advisor at the World Bank, cautions: "Any approach to AIDS in Africa must not be one which makes Africans feel that they are to blame for introducing the disease or unwanted as possible disseminators of it."[28] He fears that such accusations will make African leaders reluctant to join an effective and comprehensive international effort against the disease. In fact, several African states had refused permission to researchers to publish or discuss results because of adverse publicity. The origins issue promises to remain a volatile one which easily arouses emotions and which may never be resolved.

Sexual Transmission

AIDS in Africa is different than the disease elsewhere in some key respects. Homosexual activity has been the primary way to transmit the disease in other parts of the world, including the United States, while in Africa (and the Caribbean) the transmittal of AIDS is primarily the result of heterosexual activity. Consequently, while in the United States and Europe, there are 16 male for every female AIDS victim, in Africa equal numbers of men and women are infected.

AIDS has spread more quickly in Africa than elsewhere, precisely because it is heterosexually transmitted. Almost every sexually active adult is in the at-risk population. Also, African populations may be more susceptible to the HIV infection because of the high prevalence of other infectious diseases, many of which also affect the immune system.[29]

Promiscuity also contributes to the spread of AIDS. Studies that compare AIDS patients and control groups show that the AIDS group had significantly more heterosexual partners and that men with AIDS had had relations with female prostitutes much more often than those without the disease. Surveys suggest that levels of sexual activity outside marriage are high in African cities, especially among young people though not necessarily higher than in other parts of the world.

John Caldwell, an expert on African population issues, argues that African sexual norms are in fact different than in other parts of the world and that AIDS control programs must take this into account. He cautions that "the sub-Saharan African population is not a morally backsliding Eurasian population that can be returned by exhortation and educational campaigns to a pattern of sex occurring predominantly within marriage."[30] African leaders bristle at the notion, implicit or otherwise, that Africans are more promiscuous or sexually irresponsible than other peoples. The issue remains contentious.

Individuals with untreated sexually transmitted diseases (STDs), such as syphilis, herpes, and especially gonorrhea are at a much greater risk of HIV infection. HIV is not automatically transferred when an infected person has relations with an unaffected person; indeed, if both are otherwise healthy, the odds are small that the virus will be transmitted. However, the genital sores brought on by STDs appear to be highly effective conduits of HIV.[31]

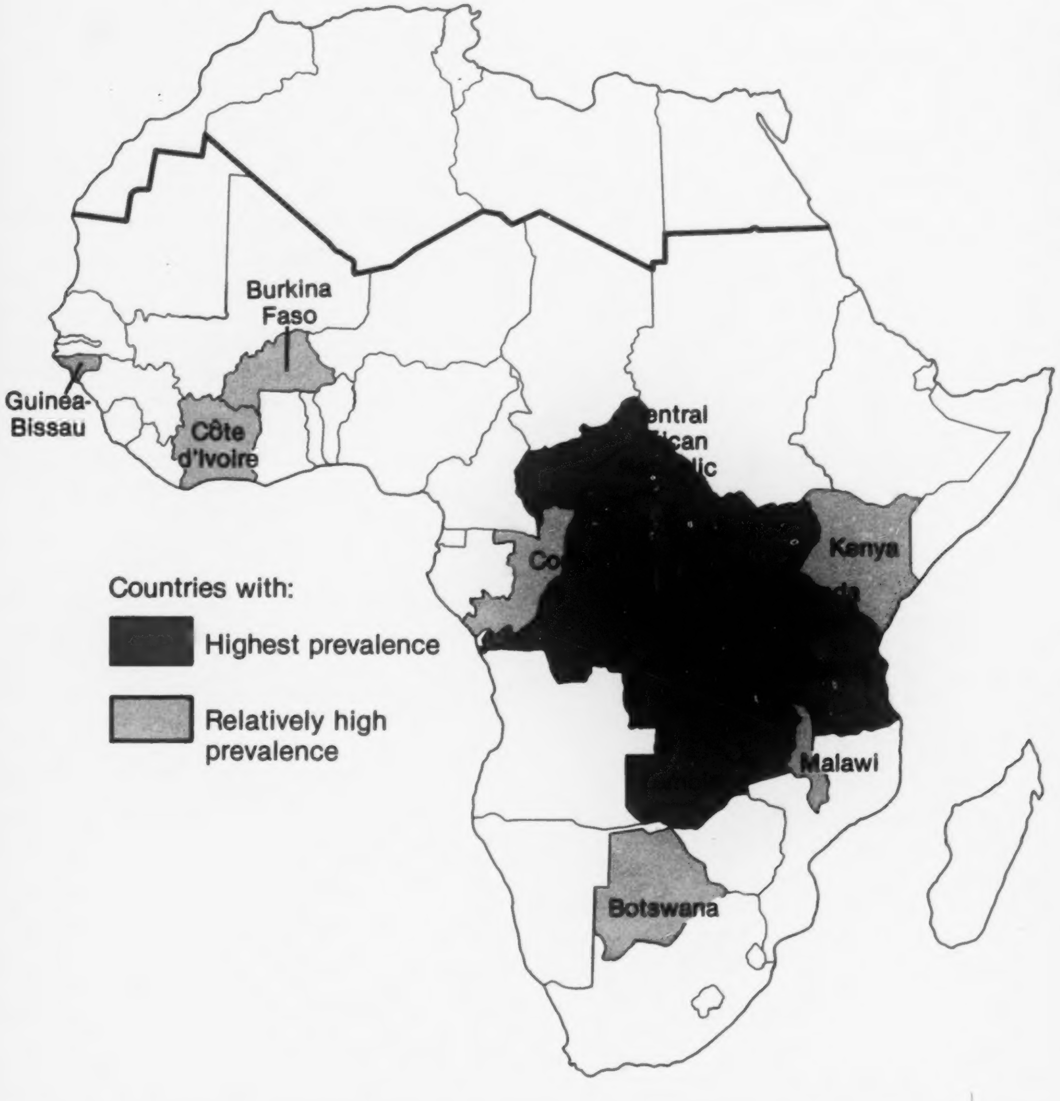
STD levels have long been high in this part of the world. For example, the estimated rate of gonorrhea per 100,000 persons in the early 1980s was 10,000 in Kampala, Uganda and 7,000 in Nairobi, Kenya, but only 310 in London, England. The combination of many sexual partners and the presence of a sexually transmitted disease provide optimal conditions for the transmission of AIDS.[32]

Some anecdotal evidence suggests that STD levels are declining in the parts of Africa most affected by AIDS. If this is true, some hope exists that the spread of the HIV infection will slow down.

Geographic Concentration

In the 1980s, levels of HIV infection and AIDS were highest in seven countries—Central African Republic, Zaire, Zambia,

Figure 4. Sub-Saharan Countries with High Prevalence of AIDS, 1980s


Burkina Faso
Guinea-Bissau
Côte d'Ivoire
entral
ican
lic
Co
Kenya
Malawi
Botswana
Countries with:
Highest prevalence
Relatively high prevalence

Source: Chin, James, et al., "A Global Response to AIDS," *AFRICA REPORT*, 33 (November-December 1988) p. 14; Heise, Lori, "AIDS: New Threat to the Third World," *Worldwatch* (January-February 1988) p. 25.

Tanzania, Burundi, Rwanda and Uganda—referred to as the AIDS belt. Scattered evidence also indicates relatively high levels of HIV infection in neighboring Congo, Kenya, Malawi, and Botswana, as well as in Guinea-Bissau, Burkina Faso, and Côte d'Ivoire in West Africa (see Figure 4).

AIDS in Africa is overwhelmingly a phenomenon of the urban areas and the transport routes between the cities. HIV prevalence rates are estimated to be 10 to 20 times higher in the cities of the most affected nations than in the countryside.[33] Sexual practices are less restrained in the cities and along the truck routes than they are in the rural areas, particularly since high rates of rural-to-urban migration have disrupted traditional tribal values without replacing them with new forms of social control. Still, the very fact that African populations are predominantly rural has undoubtedly limited the spread of AIDS. On the negative side, many of the best educated and most productive Africans live in the cities, so AIDS can have a disproportionate impact on development. President Kenneth Kaunda of Zambia, for example, lost a son to AIDS. His open discussion of this tragedy was an important contribution to the evolution of AIDS control efforts in the region. The loss of skilled manpower, the high costs, both direct and indirect, and the disruption of families, all promise to slow further the economic development of the region.

Prevalence

For all the concern about AIDS in Africa, surprisingly little scientific knowledge is available as to its extent. Regardless of the concerns over adverse publicity, African governments must recognize the importance of increasing overall knowledge of the workings of AIDS in the region, as a critical component of a control program. To some degree, the situation is improving. Uganda, for example, has recently completed a national sero-prevalence survey, the first of its kind in the region. The results are not yet available.

Most information on prevalence comes from surveys and tests, often among highly selective groups such as prostitutes, blood donors, or pregnant women. Nearly all the surveys are from urban areas or stops along the trucking routes. Summarizing these scattered sources of information in 1988, World Health Organization officials reported that from 5-6 percent of healthy blood donors, 25-30 percent of pregnant women, and from 27 to an astonishing 88 percent of female prostitutes tested HIV positive. For example, HIV infection rates among tested prostitute groups were 27 percent in Kinshasha, Zaire; 66 percent in Nairobi, Kenya; and 88 percent in Butare, Rwanda.[34] In a survey in Zambia's copper region, 10 percent of women at an antenatal clinic were found to be HIV infected. In Ndola, a town in that region, 13 percent of blood donors were found to be carrying the HIV infection. Overall, WHO roughly guesses that the number of infected persons in Africa may be 2 to 3 million. The number of actual AIDS cases is much lower, probably around 100,000 by mid-1988.[35]

The high prevalence of HIV infection among pregnant women in the urban centers of East and Central Africa is especially disturbing because the mother can transfer the AIDS virus to the child either before or after birth. World Health Organization officials express concern that hard-earned gains from child survival programs may be lost due to increased infant and child mortality from AIDS. Beyond directly caused deaths, the AIDS epidemic is also placing great demands on African health systems already under tremendous financial strain.

Demographic Impact

Beyond the personal tragedies, AIDS in Africa also raises critical demographic questions. Will mortality from AIDS reduce growth rates and disrupt the long-term pattern of rapid population increase? Or will AIDS be little more than a blip on the long-term demographic trend line? Will high mortality from AIDS depress the evolution of family planning programs in sub-Saharan Africa? Or will the increased use of condoms as an AIDS preventive serve as a boost for family planning efforts?

The long-term demographic impact of AIDS in Africa is an unknown. No benchmark and follow-up studies exist to determine how fast HIV infection is spreading. If expansion continues to be high in the urban areas and begins to increase in the rural areas, then the demographic impact of AIDS could be severe.

John Bongaarts, demographer at the Population Council, has prepared a series of computer simulations on the course of AIDS in Africa. He finds that even without development of a vaccine to prevent AIDS or significant changes in sexual behavior, virtually all increases in HIV prevalence rates should occur during the first 25 years of the epidemic, after which a relatively stable state of equilibrium is reached. This computer simulation suggests that HIV prevalence will peak at somewhere between 20 and 30 percent of the adult population, *in the most severely affected countries and in the absence of effective medical interventions and substantial changes in sexual behavior.*

In this high threat scenario, population growth remains positive and rapid, though much less than it would be in the absence of AIDS. For example, if, in an Eastern or Middle African country, HIV prevalence rates rose from 0 to 20 percent between 1975 and 2000, and if the initial population growth rate were 4 percent per annum, then the growth rate in the year 2000 would be about 3.1 percent per year. At that rate, a national population would double in about 22 years. If the initial growth rate were 3 percent, the AIDS epidemic would reduce it to 2 percent by 2000. Thus, even in the high threat AIDS scenario, the populations of these nations continue to grow rapidly, though at lower rates.[36]

Education programs designed to change sexual behavior are at the core of AIDS prevention programs in African countries. Anecdotal evidence from such places as prostitute havens along truck routes, suggests that some of the highest risk sexual behavior is being modified already. If that is true and modifications in sexual behavior lessen the spread of HIV infection, then the demographic impact will be even less than indicated under the high threat alternative. Also, only between 7 and 10 of the sub-Saharan states have been substantially affected so far. Presumably, the demographic impact of AIDS in the more than 30 remaining countries, including such large states as Nigeria, will be much less. On the other hand, while the above simulation shows that prevalence rates peak about 25 years after the start of the epidemic, this may not happen. In that case, the demographic impact would be even greater than suggested.

AIDS projection models are being refined. Combined with new knowledge from sero-prevalence surveys, the models should contribute to a better understanding of the demographic implications of AIDS in Africa.

Effects on Family Planning

Some observers have expressed concern that rising mortality from AIDS could lead African governments to retreat from recently adopted policies to reduce fertility and population growth rates and to divert policy attention and resources away from family planning programs. Historically, family planning programs do succeed best in cultural settings where mortality is declining.

Condom use has risen dramatically in many sub-Saharan countries in response to AIDS. According to some reports, for example, the demand for condoms in Kenya rose from 10,000 per month in 1987 to 300,000 per month by the end of 1988. In Africa, however, condoms have ordinarily been used with prostitutes and extra-marital partners. For that reason, condoms used to prevent or control AIDS are not likely to have much effect on overall fertility levels.

Policy Options

Current wisdom is that no medical solution to the AIDS problem will be forthcoming before the end of the century. Viruses such as HIV have been known to mutate to benign forms on their own, but national policies cannot be predicated on such expectations. Policies must be based on public education campaigns to make people more aware of the dangers of AIDS and explain the ways to prevent the disease, and on programs to make condoms more widely available. Ultimately, the general populace, particularly in the urban areas, must be persuaded to avoid high risk sexual behavior. This is a daunting task; critics note the inability of health education campaigns in general to change behavior.

The World Bank's Fred Sai argues against extreme pessimism. He points to the radically changing sexual practices of homosexual men in the San Francisco area as evidence that behavior can be changed. He urges African leaders to shed any remaining ambivalence about the seriousness of the AIDS problem and the need to mount urgent public education campaigns and to provide adequate condom supplies. "The aim," Sai concludes, "must be to provide hope, not panic; acceptance of a problem to be tackled, not apocalyptic doom."[37]

Determinants of High Fertility

Over the long term, fertility is almost certain to decline as Africa moves away from traditional societies toward a world of modern medicine, education, wage employment, and scientific farming. But for the present, a myriad of cultural and economic factors combine to keep African fertility the highest in the world.

Little Education; Rural Residence; Low Income

Africans are largely smallholding farmers who earn paltry incomes and have little, if any, education. Poverty, illiteracy, and a provincial rural lifestyle are associated with high fertility just about everywhere in the world. In sub-Saharan Africa these three factors help explain the persistance of many cultural beliefs and practices that keep birth rates so high. Some of these characteristics are common in most developing countries, others are uniquely African.

Low Status of Women and Need for Old Age Security

Although African women have traditionally played a major role in agricultural production, their primary roles are still seen as those of wife and mother. They have limited legal rights and in many places their status is further weakened by the practice of polygyny. Precisely because of the limited opportunities women have, the status imparted by childbearing assumes great importance. Demographer (and current Australian High Commissioner to Zambia) Helen Ware writes that "as mothers they wield considerable power and influence," adding that women's status could be weakened by a strong push to limit childbearing unless some new avenues for advancement are established.[38]

African women value children for their labor as well. With the arduous chores of primitive cooking and housekeeping, fetching water and fuelwood, and rearing large families added to labor in the fields, it is little wonder that women welcome assistance provided by children. C. Lwechungura Kamuzora of the University of Dar es Salaam argues that it is such economic underpinnings which support the high fertility regime in Africa, not religious or cultural values. Ultimately, he says, large families are desired because of the high demand for labor in African peasant economies and the need for economic security for women necessitated by their low status.[39] African women often may not own assets or inherit the use of land, so there is a particular need to produce many sons to ensure that some will survive to take care of them in old age.

Early Marriage, Strong Family Ties

Virtually all African women marry, usually at a young age. Women simply do not remain unmarried or childless by choice. Divorced or widowed women remarry

Table 4. Socioeconomic Indicators, Sub-Saharan Africa, 1980s

	Percent urban	Percent labor force in agriculture (females)	GNP per capita 1987
Sub-Saharan Africa	**28**	**—**	**440**
Western Africa	**28**	**74**	**380**
Benin	39	75	300
Burkina Faso	8	86	170
Côte d'Ivoire	43	75	750
Gambia	18	86	220
Ghana	32	52	390
Guinea	22	88	na
Guinea-Bissau	27	92	170
Liberia	42	87	440
Mali	18	74	200
Mauritania	35	87	440
Niger	16	94	280
Nigeria	28	69	370
Senegal	36	90	510
Sierra Leone	28	82	300
Togo	22	67	300
Eastern Africa	**18**	**90**	**240**
Burundi	5	98	240
Djibouti	74	na	na
Ethiopia	11	85	120
Kenya	19	86	340
Madagascar	22	94	200
Malawi	13	94	160
Mozambique	20	96	150
Rwanda	6	98	310
Somalia	33	90	290
Sudan	20	87	330
Tanzania	19	92	220
Uganda	9	89	260
Zambia	43	84	240
Zimbabwe	24	82	590
Middle Africa	**37**	**89**	**400**
Angola	25	89	na
Cameroon	42	78	960
Central African Republic	35	75	330
Chad	27	87	150
Congo	48	87	880
Equatorial Guinea	60	86	na
Gabon	41	88	2,750
Zaire	40	95	160
Southern Africa	**53**	**24**	**1,780**
Botswana	16	93	1,030
Lesotho	17	90	360
Namibia	51	51	na
South Africa	56	11	1,890
Swaziland	26	83	700

Source: Population Reference Bureau, *World Population Data Sheet, 1989;* International Labor Organization, *Economically Active Population, Estimate, 1950-1980, Projections: 1985-2025,* Volume II, Africa (Geneva: 1986); ILO *Yearbooks,* various years; *World Bank Atlas,* 1988.

quickly, a practice which is facilitated by the existence of polygyny throughout much of the continent. Consequently, African women spend nearly their entire reproductive years at risk of pregnancy.

Once women marry, the large extended families help care for the children who promptly begin to arrive. In West African countries, some children live with a grandparent or other relative for at least part of their childhood—a practice called child fosterage. In Ghana, Liberia, western Nigeria and Sierra Leone, for example, at least 30 percent of the mothers use fosterage. Working women and non-educated women use fosterage more often than non-working and educated women; the practice is more common in the cities than the rural areas.

The fosterage system brings both social and financial rewards to the children's guardians, most commonly the grandparents. It is especially prestigious for a grandmother to have her grandchildren in the household, and remittances from the natural parents for child care provide a source of support for older persons. Fosterage is also used as a way to enhance occupational and educational opportunities for the children; it is also a means of accommodating, even benefiting from, the large numbers of children born to African families.[40]

Polygyny is still common throughout much of sub-Saharan Africa. An estimated 45 percent of married women in Mali and 38 percent in Liberia, for example, live in polygynous unions. Some surveys show that women in such unions have lower fertility than those in monogamous marriages. However the interpretation of such data is complicated by the fact that infertility is grounds for divorce and barren women often remarry into polygynous households where the husband can sire children by other wives. Women in polygynous marriages who are able to bear children have large numbers of them.

Marriage is often regarded as a contract between families, with reproductive rights belonging to the husband and his family. For example, among the Igbo of southeast Nigeria, the payment of bridewealth by a man gives him all rights over a woman and her children.[41] For many Africans, a wife who tries to control her own fertility threatens to arouse the ire of her husband's ancestors and to undermine sources of long-term economic support for her husband and his family.

Although many of the economic burdens of childrearing fall to the wife, ostensibly giving her a motivation to use birth control, her social and economic vulnerability may make her loathe to limit the number of children.

The psychological benefits of children cannot be overestimated in the African setting. Indeed, in a world marked mostly by the drudgery of subsistence agriculture, children and family provide the greatest psychological satisfaction in many lives. Conversely, infertility is regarded with abhorrence and can be adequate grounds for divorce. A barren women is usually regarded with open contempt and her infertility often considered a punishment for transgressions.

High Infant and Child Mortality

Infant and child mortality rates in sub-Saharan Africa are the highest in the world. In some countries between 20 and 25 percent of all children die prior to their fifth birthday. In these settings, parents want large numbers of children to ensure that at least some will survive to adulthood. And fertility *does* seem to drop modestly in countries when infant and child mortality declines. Drops in infant and child mortality alone, however, do not appear to cause sharp changes in fertility behavior.

A general rule sometimes used by demographers is that for family planning programs to succeed, life expectancy at birth must be above 50. In mid-1989, as many as 23 sub-Saharan countries still had life expectancies under 50 years; another 8 hovered close to that level. Cultural traditions die hard in peasant societies, even as external circumstances change. With mortality rates still relatively high, the days of high death rates and loss of children are more than lingering memories.

Pietronella van den Oever

African women play a major role in agricultural production, but their primary role is that of wife and mother.

Economic Support from Children

Children are expected to contribute substantially to their parents' well-being, especially that of their fathers and their lineages. Payment of tribute is expected from children, particularly sons, by parents or by members of the extended family in immediate need. Failure to meet expected obligations can not only bring exclusion from the affairs of the extended family, a serious sanction in African societies, but can also elicit the displeasure of the ancestors, living and dead. Angry ancestors can cause untold disasters and their wrath is to be avoided.

Transfers of wealth to relatives outside the nuclear family are probably higher in sub-Saharan Africa than in any other part of the world. Professionals are under especially strong pressures to share the rewards of modern sector employment with other family members. They do so and are rewarded with high familial status.

Parents, especially fathers, have a strong economic motivation to maintain high fertility. Education fees, health care and other expenses make children increasingly costly to raise. However, until the costs outweigh the expected returns, that is, until the transfers of wealth from the older to the younger generations exceed the anticipated tributes moving the other way, the economic underpinnings of high fertility will remain entrenched.[42]

Tribalism and Religion

Sub-Saharan Africa's great ethnic diversity tends to promote high fertility. Many Africans identify more closely with their tribe than with their nation, most of whose borders were established by European colonial powers without any regard for ethnic groups. The smaller tribes are sensitive to their relative strength in the political order, which is believed to be related to numbers.

This jostling for tribal equality or supremacy in numbers happens to varying degrees in many African countries: among Hutu and Tutsi in Burundi; Shona and Ntebele in Zimbabwe; Yoruba, Igbo, Hausa, and Fulani in Nigeria, to mention a few examples.

Religion also affects Africans' views toward family planning. Large numbers of Africans still adhere to animistic beliefs based on a mystical, non-scientific view of the world. Planning the spacing and size of one's family may well not fit into lives thought to be dominated by supernatural forces.[43]

In many African societies, contributing to the immortality of the lineage by having large families is a fundamental religious responsibility which underlies high fertility regimes. In addition, bearing many children, along with abundant crop yields, is a sign of the gods' approval. Although two-thirds of sub-Saharan Africans are either Christian or Moslem, most still retain some belief in ancestral forces. These forces use their powers most often to ensure the survival of the lineage because the ancestors are expected to be reborn as descendants. Because belief in these ancestral systems remains so strong and persistent in sub-Saharan Africa, the resistance to fertility decline may be stronger here than in other parts of the developing world.[44]

More and more Africans are embracing Islam, which has further bolstered the preference for high fertility. Islam is not theologically opposed to the use of modern forms of contraception or planning of families, but as actually practiced in rural Africa it tends to value large families and restricted roles for women.[45]

Christianity is also expanding. Attitudes toward family planning and contraception vary widely among Catholics in Africa, as elsewhere in the world. Nevertheless, in countries like Burundi, the political influence of the Roman Catholic Church and provision of many health services through Catholic missions may be added impediments to a working population program.

Coping with Population Pressures

High fertility creates severe problems for African families. Smallholdings are fragmented in size; the land becomes less productive; education becomes costly and at times inaccessible; health care becomes harder to obtain. Yet the first response to the increased population pressure is not to lower fertility but rather to seek alternative ways to support the growing numbers of people.

For example, Kokou Vignikin reports that in southeast Togo the initial response of rural families is to intensify production—often at the cost of permanent damage to the soil—and to send family members to work in Lome, the capital, so they can send money to relatives back home. In this way, many Togolese families have been able to sustain high fertility despite increasingly limited land resources.[46]

Robert Levine noted that average smallholding size among the Gusii people of Kenya fell from 7 to 3 acres between 1956 and 1974 as both fertility and population size rose. Some Gusii migrated to less settled areas; others turned more to cash crops to augment family income; still other households became increasingly dependent on remittances from family members working in the cities and on the commercial plantations. Limiting family size was not chosen as an option. The Gusii, Levine notes, "have always looked to children for their economic, social, and spiritual security and tend to think of strategies for adapting to new conditions that include children rather than strategies that limit their number."[47]

Limited Contraceptive Use

In addition to the many cultural and economic factors encouraging high fertility in

Africa, the access to safe, effective contraceptive methods is quite limited. Fertility surveys completed since 1986 show that modern contraception was used by less than 4 percent of currently married women of reproductive age in Burundi, Togo, Uganda, Mali, and Senegal; only 5 percent in Ghana; and 6 percent in Liberia. In only 5 of the 20 countries for which we have survey data does contraceptive use exceed 15 percent of married women. Three of the five are in southern Africa (see Table 5). Modern contraceptive use rates in most non-African countries are much higher: for example, 18 percent in Bangladesh, 65 percent Thailand, and 45 percent in Mexico.

Despite low rates of usage, surveys record a high level of knowledge about modern contraceptives—70 percent or higher in most countries. Knowledge appears to have increased over the past decade, perhaps an indication that more women will begin using birth control. Actual use has increased markedly in a few countries as well. The percentage of married women using modern con-

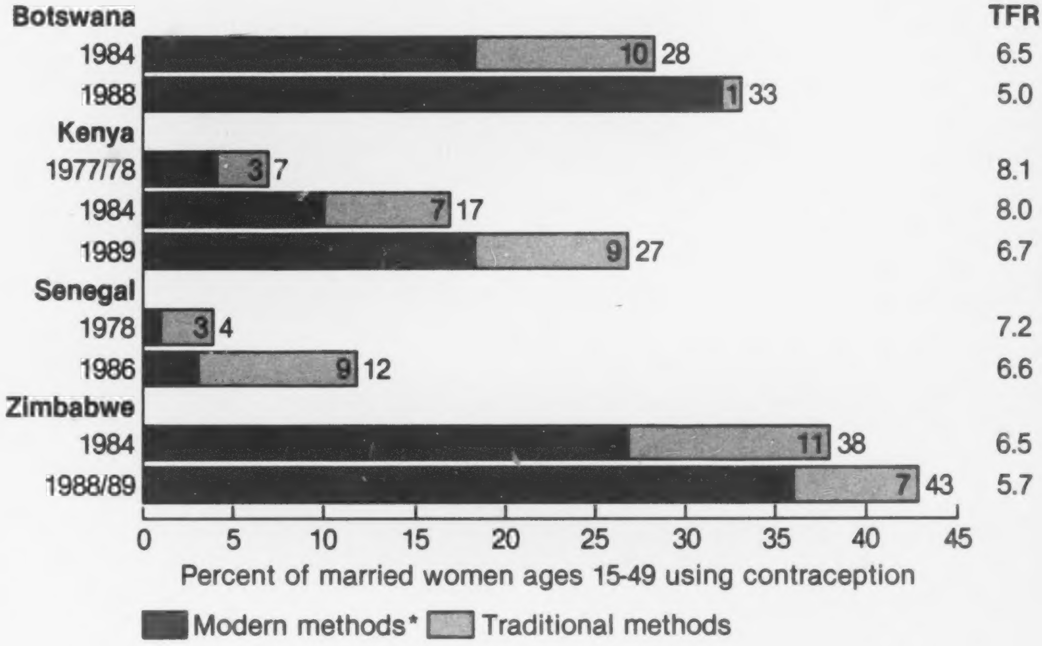
Table 5. Contraceptive Knowledge and Use, Sub-Saharan Africa, Most Recent Estimates

		Percent of married women, 15-49			
				Current use	
	Year	Knowledge	Ever-Use	Any method	Modern method
Western Africa					
Benin	1981-82	40	34	9	1
Burundi	1987	78	30	9	1
Côte d'Ivoire	1980-81	85	71	3	1
Ghana	1988	79	37	13	5
Liberia	1986	70	19	7	6
Mali	1987	43	19	5	1
Mauritania	1979	8	2	1	0
Nigeria	1981-82	34	13	5	1
Senegal	1986	92	38	12	3
Togo	1988	96	74	34	3
Middle Africa					
Cameroon	1978	34	11	2	0
Eastern Africa					
Kenya	1989	93	45	27	18
Rwanda	1983	72	18	10	1
Sudan (North)	1978-79	51	13	5	4
Uganda	1988-89	84	22	5	3
Zimbabwe	1988-89	99	79	43	36
Southern Africa					
Botswana	1988	95	63	33	32
Lesotho	1977	65	23	5	2
South Africa	1980	—	—	48	45
Swaziland	1988	—	—	20	17

Modern methods include oral contraceptives, IUDs, male and female sterilization, injectibles, condoms, and other chemical or barrier methods.

Source: United Nations, *Levels and Trends of Contraceptive Use As Assessed in 1988*, Population Studies, No. 110, New York, 1989, Tables 2 and A.11.1; Institute for Resource Development/Macro Systems, Inc., *DHS Newsletter* (Columbia, MD: Summer 1989) p. 10.

Figure 5. Increases in Contraceptive Use: Botswana, Kenya, Senegal, and Zimbabwe



*Methods include oral contraceptives, IUDs, male and female sterilization, injectibles, condoms, and other chemical or barrier methods.

Source: United Nations, *Levels and Trends of Contraceptive Use*. 1989; *DHS Newsletter*, 1989.

traceptives increased from 4 to 18 percent in Kenya between 1978 and 1989 and from 27 to 36 in Zimbabwe between 1984 and 1989 (see Figure 5).

A Paradox

Africans have large families because they want them and perceive them to be in their economic and personal interest. High infant and child mortality, poverty and limited economic opportunities, insecurity, and restricted access to education mean that African couples' choice of large families is reasonable.[48] Yet large families and consequent rapid population growth are detrimental to the social and economic development effort in many African countries, thus negatively affecting most families.

Along with this paradox at the individual level, there is a vicious circle at the public level. Ultimately poverty and limited opportunities cause a gap between public and private interests, between the need to slow population growth to advance development and the desire for large families. It is the alleviation of poverty and increased social and economic opportunities that will close the gap. Yet the rapid rates of population growth make it increasingly difficult for African nations to reduce poverty and improve the lives of the people.

Barriers to Population Policy Formation

The key to closing the gap between public and private interests, as experience in other developing countries has shown, is the development of explicit population policy and political commitment to population programs. Yet in the 20 to 25 years following independence (in the late 1950s and early 1960s), population policy received little attention from African leaders.

Lack of Political Concern

Eager to pull their new nations into the modern world, most post-colonial African leaders focused first on the most productive aspects of economic and social development and foreign assistance.[49] Population growth was not a concern. Moreover, much of the pressure to reduce population growth was suspect because it came from Western aid donors. Many Africans were concerned that an emphasis on population policy would gloss over inequalities in the world economic order which they considered the real root of the region's poverty and underdevelopment.

Similarly, many Africans viewed population programs as family planning services only and insisted that social and economic development, not family planning programs, would eventually lower birth rates.

Leaders in the new states were cautious about delving into population issues. Religious and tribal rivalries made population and family planning programs politically sensitive. And, like politicians everywhere, they focused their attention on short-term issues for which they would be held politically responsible rather than longer-term issues which demand some vision of the future.

Also, African leaders lacked reliable data to understand fertility levels and to demonstrate how fast the population was growing. Most nations had not taken a census or major survey before the 1960s.

Accommodation to Growth and Other Factors

Africa, at the time of independence, had a small population relative to the size of its resource base. When population growth *rates* increased impressively with the fall in death rates after World War II, the actual *number* of people added each year was still relatively small and easily accommodated within the existing economy. Until the mid-1970s, the economies were growing fast enough to raise incomes and living standards even with rapid population growth.

Other factors discouraged the formulation of policies to limit population growth, such as the legacy of the French pronatalist intellectual tradition. In the African micro-states, the small internal market and the absence of international trade agreements have discouraged economic development. And the vast physical size of the continent creates an illusion of rich resources ripe for exploitation. The vastness belies the fact that much of the empty land is of marginal usefulness.

World Bank/Ray Witlin

Case Studies in Population Policy Formation

Zambia

Zambia is a high fertility, high population growth rate country. The 1980 Census indicated a fertility rate of about 7.2 children per woman and a population growth rate of about 3.4 percent per year. In 1989, the annual growth rate was an estimated 3.7 percent, a rate at which the population would double in less than 19 years.

Historically, attitudes towards population growth among Zambian leaders have ranged from pro-natalist to laissez-faire. Zambia is a large country (about 750,000 square kilometers) with a relatively small population (about 8.1 million in 1989). Population policy simply was not a priority issue in the decades following independence.

As in much of the rest of Africa, the mid-1980s witnessed marked changes in attitudes in Zambia. The release of the 1980 Census results in 1985 provided statistical evidence of the high levels of fertility and rapid population growth. The economy, dampened by a stagnating copper sector, was in decline. Income per capita was lower in the mid-1980s than it had been at the time of independence. Maize production was lower in the mid-1980s than it had been in the mid-1970s. Many doubted the nation's ability to provide adequate education, health, and other social services to a rapidly growing population.

Zambia is illustrative of the African trend. Rapid population growth *in combination with a stagnating economy* has been the key to shifting attitudes. Previously the population issue had been considered primarily in terms of relating the current size of the population to some abstract potential carrying capacity, but by the mid-1980s population policy was being debated in terms of the effect of the projected size and rate of growth of the population on the country's ability to achieve its development goals.

Accordingly, the government of Zambia, headed by President Kenneth Kaunda, one of the few independence leaders still serving as head of state in an African country, instructed the National Commission for Development Planning (NCDP) to consider a national population policy. The NCDP organized a National Seminar on Population and Development Policy in December 1985. Representatives from government ministries, from private organizations such as the Planned Parenthood Association of Zambia and the Family Life Movement of Zambia, and from other important institutions such as the Christian Council of Zambia, were invited to attend. The mandate of this meeting was to consider national population and development policy and to make recommendations for consideration by the President and the Central Committee.*

The seminar recommended that Zambia's government and the one political party (UNIP) adopt a policy to lower the fertility rate and the rate of population growth. The explicit justification was that the high growth rate was detrimental to the social and economic development effort and that reducing the rate would help Zambia regain its development momentum. The National Seminar on Population and Development Policy designated child spacing and family planning programs as the primary strategies for reducing fertility.

Subsequently, in 1986, the NCDP drafted a national population policy statement for review by the Social and Cultural, and Women's Affairs Committees of the Central Committee of the UNIP. The policy was debated extensively within party and government circles, and in regional seminars throughout the country. Partially as a result of this lengthy review, the policy was not formally adopted until January 1989, when it was issued as part of the Fourth National Development Plan.

The document observes that fertility in Zambia, at 7.2 births per woman, is among the highest in the world. It also notes the adverse impact of the high rate of population growth on the social and economic development of the nation and that population growth has consistently outstripped economic growth. The policy reads: "It is, therefore, necessary to achieve a complementarity between the rates of growth of the economy and of the population."[1]

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*Like much of Africa, Zambia is a one-party state, and the Central Committee of the United National Independence Party (UNIP) is the most powerful political body in the country.

The Zambian policy addresses migration, urbanization, maternal and child health, and high mortality, as well as high fertility and rapid growth rates. The policy calls for sustained measures to reduce the total fertility rate from 7.2 children per woman to 6 by the year 2000 and 4 by the year 2015. This would lower the annual population growth rate from its 1989 level of 3.7 percent to 3.4 percent by 2000 and to 2.5 percent by 2015—still a high rate by historical standards. Nevertheless, the policy statement is far removed from the laissez-faire attitudes of earlier years.

To implement the population policy, the NCDP organized a National Conference on Zambia's Population Policy in May 1989. President Kenneth Kaunda addressed this unprecedented assembly with some remarkably candid remarks about the evolution of population policy. Like many African countries, Kaunda said, Zambia had dismissed the importance of population growth to development in the years following independence.

The reappraisal of population issues in the 1980s, said President Kaunda, had been forced by the growing realization that the rate of population growth had to be commensurate with the social and economic development of the country. Because of dwindling national revenues and the increasing demands of the growing population, Zambia had failed to achieve targeted improvements in the areas of education, health, housing, food supply, employment, and social services. The GDP grew by less than 1 percent per year over the 1980-1985 period, while the population was growing by 3.6 percent annually. The economy recovered somewhat between 1986 and 1988, but economic growth remained lower than the rate of population growth. Living standards continued to decline.

While acknowledging that the policy formulation and adoption processes had been long, even tedious, Kaunda believed the resulting policy was comprehensive, well-articulated, consistent with other national development policies, and respectful of the human rights and the ethnic, religious and sociocultural diversity of the people of Zambia. Implementation of the policy would be a long and arduous journey also, Kaunda said, but he willingly launched Zambia on that path.

Nigeria

Nigeria is the most demographically significant of the sub-Saharan countries. The estimated mid-1989 population of 109 million persons constituted about 21 percent of the entire population of sub-Saharan Africa. At its current annual growth rate of nearly 3 percent, the population would double in 24 years. With such a high rate of growth, Nigeria may well grow to be the third most populous country on earth after China and India.

Despite such powerful demographics, population policy was not a compelling issue in the two decades following Nigeria's independence. There was little information on which to base a serious consideration of the role of demographic factors in development. The last reliable census was taken in 1963 and even that may have been marred by an overcount. Indeed, controversy over the results of the 1963 count may have contributed to the outbreak of civil war.

Nigeria is an outstanding example of a nation created by colonial accident rather than historical evolution. The country has at least 250 different tribal groups and close to 400 separate languages. It is divided as well among Moslems, Christians, and the traditional religions.[2] In 1967, civil war broke out and the Igbo in the East seceded and formed the independent state of Biafra. The civil war lasted three years and took 600,000 lives.

The 1970s brought an economic boom to Nigeria, financed by petroleum. The first oil had been exported from Nigeria as early as 1958 and the sector had grown gradually thereafter. In 1973-74, in the wake of the Arab-Israeli war and the subsequent Arab petroleum embargo, oil prices quadrupled in a single year. Nigerian oil production reached 2.3 million barrels per day in 1974, dropped back to 1.8 million barrels per day in 1978, then surged to 2.4 million barrels per day in 1979. The price per barrel rose dramatically from $2.82 in 1972 to $11.25 in 1974 and then peaked at $38.90 in 1981. The GDP grew by more than 7 percent per year between 1973 and 1977.

The petroleum-driven economic boom muted any concern that population factors might severely limit Nigerian development. Writing as late as 1983, James Kocher, a population expert working in Nigeria, noted the laissez-faire attitude of the Nigerian government towards population issues. He wrote: "because of the oil bonanza and what is generally expected to be a prosperous economic future, most of Nigeria's leaders do not perceive current and projected population growth as a serious obstacle to achieving economic and social objectives."[3]

In the 1980s, world oil demand weakened. Nigeria produced about 2.4 million barrels per day in 1979, but that figure dropped to 1.3 million barrels per day in 1983 and 1984. The asking price for Nigerian crude dropped from $38.90 per barrel in 1981 to $28.00 per barrel in 1984. After further declines, the price rose back to the $15–$16 range.

The drop in world petroleum demand and prices had a devastating effect on the Nigerian economy. The GNP fell by an average of 3.2 percent per year between 1980 and 1986. The GNP per capita fell by more than 6 percent per year over the same time period. Nigerians were also beginning to realize that they did not have the petroleum resources of a Saudi Arabia; rather, oil in Nigeria was a limited resource that would be depleted in about a generation.

The Nigerian Fertility Survey of 1981-1982 revealed a fertility rate of about 6.3 children per woman, suggesting a population growth rate around 3 percent per year. With such high fertility and a rapid population growth rate, Nigeria could anticipate adding more than a 100 million persons to its population in less than 25 years.

In December 1983, Major General Muhammadu Buhari became Head of State in a military takeover; he in turn was replaced by Major-General Ibrahim Babangida in August, 1985. These military governments, well advised by the Ministry of Planning, were soberly aware of the economic realities of the country and attitudes towards population policy began to change. At the International Conference on Population in Mexico City in August 1984, the Nigerian delegation reported: "The Government now recognizes, more than ever before, the fact that the overall rate of growth has to be brought down to the level at which it will not impose excessive burdens on the economy in the long run."[4] By the end of 1984, the government had decided that something had to be done about the high rate of population growth. The task was assigned to the Ministry of Health.

Ministry of Health officials in turn organized an Interministerial Consultative Group on Population and Development, consisting of members from each relevant ministry and major private sector organizations. Health officials sponsored a Plan of Action Workshop for the Interministerial Consultative Group to discuss the magnitude and implications of population growth and the need for a population policy and program and to develop policy recommendations. This Plan of Action Workshop called for the adoption of a national policy to reduce fertility and the rate of population growth and designated a drafting committee to formulate a policy statement.

A policy was drafted and approved by the larger Interministerial Consultative Committee by the middle of 1985. A lengthy but politically necessary process of regional review of the draft policy, as well as internal debate within the government prevented policy from being officially adopted until February 1988. In the interim, the Ministry of Health, the National Population Bureau and other groups developed an extensive awareness campaign in the states on population and development, organized institutional structures for implementation of the policy, formulated a national Family Planning Action Plan, and organized state and LGA (local government authority) plans for family planning service delivery.

The *National Policy on Population for Development, Unity, Progress and Self-Reliance,* like similar documents, includes sections on mortality, youth, women's status, population distribution, and other basic issues. A fundamental goal of the policy is to achieve lower population growth rates that are compatible with the attainment of national social and economic goals. Lower growth rates are to be achieved by reducing birth rates through voluntary family planning. The primary objectives are to reduce the total fertility rate (estimated at 6.3 to 7.0 children per woman) to a 4-child per woman average by 2000, and to reduce the population growth rate to 2.0 percent per year, also by 2000.

In a few short years during the economically turbulent 1980s, Nigeria was transformed from a country where the leadership was generally indifferent to population matters, to one holding an official policy and supporting programs to reduce birth rates and population growth rates.

Zaire

Zaire is not a likely leader in setting population policy in sub-Saharan Africa. The country encompasses more than 2.3 million square kilometers (about twice the size of West Germany, France, Italy and Switzerland combined) and had an estimated mid-1989 population of 34.9 million persons. In a 1982 study, the Food and Agricultural Organization indicated that Zaire has enough land to feed upwards of 300 million persons on a sustained basis, even using subsistence agriculture technologies.

Nonetheless, Zaire has followed the pattern of other African nations in the development of a national population policy. Again, economic factors are at the center of evolving attitudes. Between 1965 and 1986, the World Bank estimates that the GNP per capita fell by an astonishing 2.2 percent per year. In 1987, GNP per capita was only $160, placing Zaire among the four poorest countries on earth.

In this historical context of high population growth rates and economic decline, a number of factors and events contributed towards the crystallization of a national population policy. Several are mentioned below.

A few foundation blocks for constructing a national population policy existed prior to the 1980s. Family planning began in Zaire in the early 1970s with the *Naissances Desirables* (Desired Births) program. In the early 1980s, this program became affiliated with and received funding from the International Planned Parenthood Federation. Additional funds for family planning were sought from international donors. The University of Kinshasha, Zaire has long had active academic programs in demography.

The Second African Population Conference in Arusha in 1984 and the Mexico City Conference later the same year contributed much to population thought in Zaire. In June 1985 the government held a seminar on the preliminary results of the 1984 census, which confirmed the status of Zaire as a high fertility, rapidly growing country. The *Departement du Plan* (Ministry of Planning) presented a microcomputer simulation model showing the impact of population growth on development at this meeting.

Representatives from the same Departement du Plan, attending a workshop held in conjunction with the All-Africa Parliamentary Conference on Population and Development held in Harare in 1986, reported that Zairian leaders were convinced of the importance of developing a national population policy and were ready to act. Also, in June 1986, the Departement du Plan held a second seminar on population and development planning which succeeded in convincing senior officials of the need for a national population policy. Much of the impetus from this seminar had come from the ILO Regional Population Officer who was working towards the development of a Population and Development Planning Unit to be funded by the United Nations Fund for Population (UNFPA).

The Departement du Plan was also instrumental in calling for the creation of a National Population Committee (CONAPOP), to formulate a national policy. CONAPOP consists of representatives of several ministries, religious groups, the Demography Department at the University of Kinshasha, the local International Planned Parenthood Federation affiliate and others. Departement du Plan staff demonstrated microcomputer models on population and development to the Prime Minister, the Council of Ministers and other ranking leaders in the country, and helped organize a trip to Nigeria to observe the policy formulation process in that country.

In culmination of these efforts, the government held a five-day working meeting with representatives from all the ministries and the principal private organizations to discuss the formulation of a national population policy. As the meeting closed, a group of seven experts from the ministries and the university met to draft the policy.

The resulting *Politique Nationale de Population au Zaire* is a comprehensive statement on population policy in the country, addressing mortality and migration as well as fertility. The stated basic objective of the population policy is to raise the quality of life of Zaire's citizens by bringing population growth into equilibrium with economic growth. The policy document recognizes the detrimental effects of Zaire's high population growth rate on public health and on social and economic development, especially given the long history of poor economic performance. The policy calls for increasing contraceptive prevalence from its present level to 10 percent by the year 1990 and to 33 percent by the year 2000. In addition to the policy, Zairian officials prepared a detailed set of implementation action plans.

The policy was adopted by the National Population Committee and sent to the Executive Council (cabinet) in mid-1989 for approval. In the council, the approval process was stymied. Many of the *commissaires* (ministers) were relatively new and had not been involved in the lengthy policy formulation process. They returned the policy to the National Population Committee asking for numerous clarifications. In October 1989, the National Population Committee was still preparing responses for the Executive Council, but hoped to resubmit the policy in the near future.

Liberia

The West African country of Liberia, with 2.5 million inhabitants in mid-1989, has historical ties to the United States. Liberia was founded in 1822 by the American Colonization Society as a haven for freed slaves. The members of the American Colonization Society were opposed to slavery, but were also reluctant to have the freedmen settle in North America. In 1847, the country became the independent Republic of Liberia.

The development of a national population policy has followed a pattern in Liberia similar to that elsewhere on the continent. Liberia took national censuses in 1962 and 1974, and then again in 1984. National demographic surveys were taken in 1969, 1972, 1978, 1979, and 1986. Collectively, these surveys and enumerations presented a picture of a country with a high fertility rate and a population growth rate exceeding 3 percent per year. The population had doubled in size—from 1,016,443 to 2,101,628—between the 1962 and 1984 Censuses.

While Liberia's population continues to expand, the country's economic misfortunes have grown. Over the 1965-1980 period, the gross domestic product (GDP) increased by an annual average of 3.3 percent, very close to the yearly rate of population growth. Consequently, GDP per capita changed little. Between 1980 and 1986, the GDP actually dropped by 1.3 percent per year, sending per capita income into a sharp decline.

The setting was ripe for a re-evaluation of population policy in Liberia. An initial event in Liberia's population policy evolution was a U.S. Agency for International Development-sponsored analysis on the long-term implications of the rapid rate of demographic growth for the social and economic development of the country. A corresponding series of presentations and discussions with ranking political leaders helped to crystallize Liberian thought on population issues.

Subsequently, the Liberian Ministry of Planning established a National Committee on Population Activities composed of 15 members from key ministries and selected private organizations. In 1984, this committee produced an important document, *Liberia: Towards Population Policy Formulation,* which argued that the rapid population growth was impeding the social and economic development of the country. It called for lower growth rates to be attained through the expansion of voluntary family planning and maternal and child health programs. This preliminary document also emphasized the need to improve educational opportunities for women and to improve living conditions in the countryside to stem the high level of rural-urban migration, especially to Monrovia.

The National Committee on Population Activities subsequently sponsored a number of population conferences and media awareness programs on population and development. In September 1986, the government established the Population Commission for Liberia to develop a national population policy. The organization was composed of 21 members from selected government ministries and other private organizations. A national population policy was drafted by February 1987; President Doe endorsed it and sent it to the legislature in September of the same year; and the Population Commission disseminated the draft policy to the public through a variety of media during a National Population Week the same month. In July 1988, the policy completed the presidential and legislative approval processes and was enacted into law.

As with many of its counterparts in other nations, the population policy is detailed in a comprehensive document which includes a rationale, objectives, and strategies for implementation in several key areas: maternal and child health; family planning; the role of women in development; population programs for children and youth; population education and information; rural-urban migration; and data collection, research, and training.

The economic underpinnings of the policy are openly stated: "The goal of the population policy in regulating fertility and reproduction should be to reduce total fertility in order for population growth to correspond with the socioeconomic growth of the nation."[5] The policy calls for greatly expanded family planning services to increase contraceptive prevalence to 50 percent of couples of childbearing age by the year 2000, and to reduce the total fertility rate from 6.7 to 4 children per woman over the same period of time.

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Population Policies in the 1980s

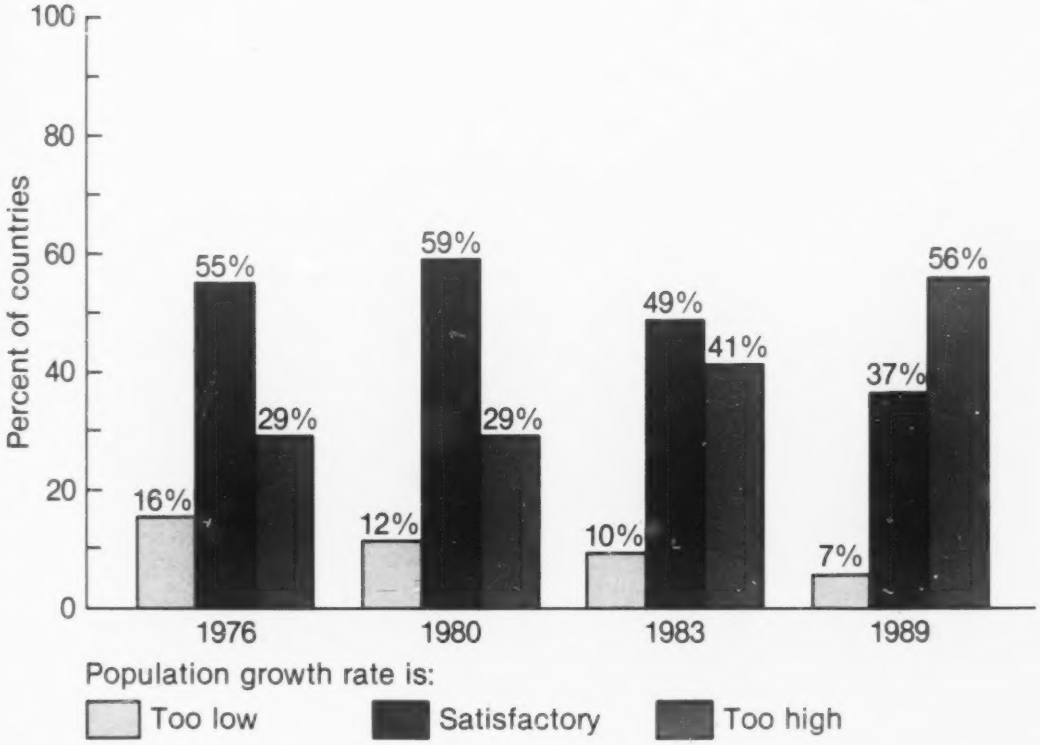
At the noted 1974 World Population Conference in Bucharest, the only sub-Saharan African nations with official policies to reduce population growth to aid development were Kenya and Ghana (and the Indian Ocean island nation of Mauritius). Even these policies were mainly rhetoric. Kenya launched a family planning program to reduce fertility in 1967, the first government program in the region, yet it received little real support. After 1967 Kenyan President Jomo Kenyatta never again mentioned the population program.

Most of sub-Saharan Africa entered the 1980s with lukewarm attitudes towards developing population policies and programs. Yet at the end of the decade, a new, much more favorable environment exists throughout much of the region for the development of population policies and family planning programs designed to reduce birth rates and population growth rates for development purposes (see Figure 6).

Contributing Factors

During the 1980s, an unprecedented amount of scientific information documenting fertility levels, rates of population growth, and the sizes of national populations began to reach high level

Figure 6. Changes in Government Perception of Population Growth Rate, Sub-Saharan Africa, 1976 to 1989



Source: UN Secretariat. Population Policy Data Bank, Population Division, Department of International Economic and Social Affairs.

government leaders.

Many African nations had their first or second censuses during the 1970s and early 1980s. These enumerations identified not only the size of the population but also fertility levels and rates of growth. The World Fertility Survey, which included 10 sub-Saharan nations between 1977 and 1982, and its successors, the Contraceptive Prevalence Survey and Demographic and Health Survey programs, and numerous special surveys provided copious data on childbearing practices and on contraceptive knowledge and attitudes among African women.

The message which emerged from this data was almost invariable: national populations were larger than previously estimated; fertility rates were among the world's highest and in many cases had been rising rather than declining; and population growth rates were the highest in the world. Nearly all the national populations in the region were on a pace to double in size within 25 years.

A series of major international conferences on population have helped to crystallize African thinking on the subject. Foremost among these was the Second African Population Conference held in Arusha, Tanzania in 1984, a prelude to the International Conference on Population held in Mexico City later that year. Both conferences were sponsored by the United Nations. The All-Africa Parliamentary Conference on Population and Development, held in Harare, Zimbabwe in 1985, also influenced political thinking.

These conferences stimulated governments to formulate official positions on population. The results are reflected in the Kilimanjaro Programme of Action on Population which emanated from the Second African Population Conference. The conferees recommended that population should be seen as a central component in formulating and implementing policies and programs for accelerated socioeconomic development plans; that government-subsidized family planning services should be made available at no or a low cost to all couples or individuals seeking such services.

Recommendations from international conferences are not in any way binding on government leaders back home. But the Arusha meeting was legitimately a seminal event in the formulation of population policies in sub-Saharan Africa which did much to spur and define the content of later national discussions.

Economic Stagnation

But, of course, it has been more than an increased awareness of population trends which has contributed to changing attitudes towards population programs. Rather, high population growth rates *in combination with* a stagnating social and economic development effort provided the catalyst for a reevaluation of the role of population factors in development.

The region's economic problems during much of the 1970s and 1980s have proven long-term, deep-seated and recalcitrant. Nor are prospects for the near future especially bright. For example, the World Bank projects that there will be no increase in gross domestic product (GDP) per capita over the 1987—1995 time span in the sub-Saharan region. Even under optimistic projections, GDP per capita would increase by only 0.7 percent per year over the 1987–1995 period. With declining or stagnating incomes, per capita expenditures on health, education and other services have also dropped.[50]

Other Factors

Other factors have also contributed to the evolution of population policies in the sub-Saharan region. Population expert Linda Lacey observes that concern over high levels of maternal and infant mortality have been factored in the decision to pursue population policies, especially among health officials, women's organizations, and religious leaders. She also notes that the activities of pioneering private family planning associations helped demonstrate the demand for services and the ability to overcome opposition.[51]

Prospects for Fertility Decline

The changing population policy environment in sub-Saharan Africa has stimulated an intense discussion about the prospects for fertility decline in the region. Some are worried that the rhetoric of the new policies has not been matched by action. Fred Sai is concerned that African governments are not giving new family planning programs high enough priority or adequate funds and that they are too often placing these activities under mediocre leadership.[52] Some observers suggest that the demand for family planning services is too small to bring about rapid fertility decline even if programs were strengthened. Others see possibilities for significant fertility decline during the decade of the 1990s.

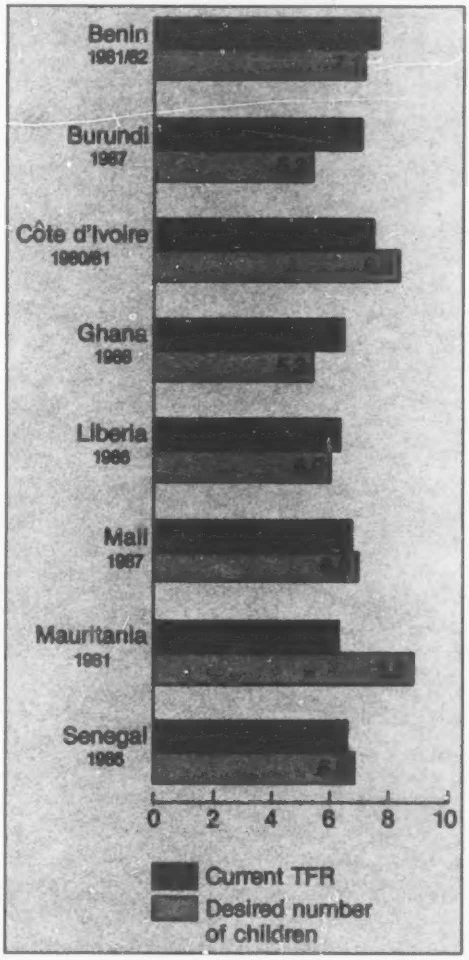
Desire for Large Families

The fertility rates are not likely to fall until African couples decide to limit the size of their families. Yet all the evidence suggests that they have many children because they want them. The ideal family size among Africans ranges from 5.3 to 8.8 children, according to survey data from late 1970s to 1989. In some countries women are having fewer children than they would like (see Figure 7).

For most countries, the average desired family size was higher than or about the same as the fertility rate. In Senegal (1986), desired family size was 6.8 children per woman while actual fertility was 6.6. In Liberia (1986), desired family size was 6.0; actual was 6.3.

Historically, desired family size (and consequently, actual fertility) has fallen as development progresses. Based on experience of the developed world and developing countries like Korea, Singapore, and Hong Kong, it seemed that industrialization, a high proportion of urban dwellers, and relatively high per capita incomes were prerequisites for fertility decline. Now it has been shown that fertility can decline markedly in countries where the economy is not yet highly industrialized, per capita income is low, and the population is still largely rural: China, India, Indonesia, Thailand, and Sri Lanka. Recent fertility declines have been associated less with per capita income levels than with improvements in life expectancy, female education, and a relatively equitable distribution of income and access to services (including family planning).[53]

Figure 7. Desired Number of Children and Estimated TFR: Selected Sub-Saharan Countries



Source: World Fertility Survey and DHS Reports.

Cultural Determinants versus Family Planning

Many experts argue that the strong cultural and economic underpinnings of high fertility in Africa are impervious to change in the near future. The demographic implications of the cultural determinants position are perhaps best summarized by John and Pat Caldwell: "But in this century there will be no declines like those of Asia, and fertility will probably remain above even the seemingly cautious World Bank standard projection. That projection shows the crude birth rate for the entire region falling from the current level of 47 per thousand population to around 40 in the year 2000. We feel that it might not fall much below 45 in the absence of a radical change in government attitudes towards family planning programs. . . ." [54]

Other observers see evidence of an increasing demand for family planning services across the continent and with it the seeds for fertility decline. Cultures are not immutable; they change, often rapidly in the modern world. In the changing environment of contemporary Africa may be found a surprisingly large unmet demand for family planning services. Several factors suggest an unmet demand for family planning: increasing prevalence of abortion; the growing practice of child-dumping, the abandonment of infants and children in the urban centers; and the strong desire among women to avoid pregnancy in the postpartum period.

Proponents of this position argue that family planning services in sub-Saharan Africa are so weak that current contraceptive prevalence figures cannot truly reflect the actual demand. Only when high quality services are widely available can the real demand for services be judged. Though the cultural determinants are strong, when good services are in place, women seem to use them and overall contraception increases significantly. The classic 1986 World Bank policy study *Population Growth and Policies in Sub-Saharan Africa* reported: "In Chogoria, Kenya, a rural area of 200,000 people where a pilot program provides easily accessible health and family planning services and careful follow-up, about 27 percent of couples use modern contraception, compared with roughly 8 percent for the country as a whole. In a rural project in Zaire the contraceptive prevalence rate (for modern methods only) is roughly 25 percent, against an average of 3 percent for Zaire as a whole. Even at the national level, [Zimbabwe and Botswana are cited as examples] when programs are strong, prevalence rates are high. . . ."[55]

There appears to be an unmet demand for contraception even among the poor. Survey results suggest that a certain proportion of African women, up to 10 percent in some countries, want no more children but are not using any form of contraception. An even larger proportion of women would like to have longer intervals between pregnancies. Furthermore, although overall desired family size remains high in Africa, it is lowest among women aged 15-24, urban women, and women with a primary or higher education. If the actual fertility of these women over time corresponds with their present intentions, contraceptive use should rise and fertility should fall.

The World Bank suggests that a contraceptive prevalence rate of 25 percent for sub-Saharan Africa could be reached over the 1986–1996 decade. Africa's contraceptive prevalence rate of about 4 percent has resulted in birth rates in the 45-50 per 1,000 range. A 25 percent contraceptive prevalence rate could lower rates to the 35-40 range, and consequently, reduce the annual rate of population growth by more than an entire percentage point.

Even if demand is as high as believed, services and information programs have to be put into place to meet it. The mostly new family planning programs in the sub-Saharan region lack resources, adequately trained staff, good management, and infrastructure. The political will to direct adequate resources towards these programs is still weak. The World Bank indicates that just to meet the goals in its medium or standard projection (see below), annual expenditures on family planning would have to rise from under $100 million in the mid-1980s to $640 million in 2000 and $3.2 billion in 2030 (in constant 1984 U.S. dollars). Rapid expansion of existing family planning programs will not be easy.

Two significant issues in this debate are, first, a sense of the relationship between contraceptive prevalence and fertility decline, and, second, an appreciation of the importance of the timing of the onset of any fertility decline for the demographic future of the continent.

Achieving Initial Declines

Demographers John Bongaarts and Odile Frank estimate that—in most populations—fertility can then be expected to decrease about 0.62 births per woman, on average, for every 10 percent increase in contraceptive prevalence. Replacement level fertility, which is slightly over a two-child per woman average, would thus require a prevalence rate of about 75 percent.[56]

But the pattern in Africa has not been consistent with these findings. In Zimbabwe, for example, a 1984 fertility survey showed that 27 percent of the married women of reproductive were using some form of modern contraception and another 11 percent were using a traditional method. The fertility rate should have been about 4.5 children per woman; in actuality, it was closer to 6.5 children per woman.[57] In Kenya, the fertility rate remained high, and possibly even rose, between the early 1960s and late 1970s, at the same time that contraceptive prevalence rose from virtually zero to about 7 percent of the married women of reproductive age. In other parts of Africa, fertility is likely to rise in the future. Economist James Knowles, for example, writes that fertility in Zaire is probably going up and that just maintaining present fertility levels until the year 2000 would be an acceptable policy goal.[58]

In Africa, cultural factors can offset the increased use of contraception. In particular, many African tribes have traditionally practiced lengthy periods of postpartum abstinence from sexual relations, ranging from a few months to close to three years. In some cases, the new mother returns to her mother's home for a lengthy stay to care for her baby. With urbanization and modernization, this practice has been decreasing in contemporary Africa. Many women no longer accept the notion that intercourse harms the mothers milk and they are increasingly disinclined to accept the sexual competition which comes with prolonged abstinence.[59] The decline in postpartum abstinence increases the time a woman is at risk of pregnancy and inevitably the fertility rate as well. And insofar as contraceptive use is a substitute for prolonged abstinence, the net impact on fertility levels will be minimal.

Breastfeeding of infants is almost universal in much of Africa. Because lactation suppresses ovulation, extended breastfeeding also serves to reduce the risk of pregnancy. However, the practice is declining in both frequency and duration, which contributes to even higher fertility in the absence of increased contraceptive use.

In addition, health practices, especially among women with some primary education, have probably improved enough over the past two decades to reduce levels of pregnancy wastage, so that a larger proportion of pregnancies result in live births.

Much of the limited demand for family planning services that currently exists in Africa appears to be motivated by a desire to avoid premarital or extramarital pregnancies and to substitute contraception for postpartum abstinence; the motivation is much less often to limit family size.[60] Contraceptive use for these purposes has a minimal effect on overall fertility.

Hence, at the outset of Africa's transition from high to lower fertility, there is no direct connection between contraceptive prevalence and fertility. As family planning programs expand in Africa, they are not necessarily going to result in immediate fertility decline; indeed, fertility may actually rise in the short term. If contraceptive use continues to rise, however, fertility levels will invariably begin to fall. The erosion of traditional breastfeeding and abstinence practices, as well as other mechanisms for childspacing, argues for the expansion of family planning services.

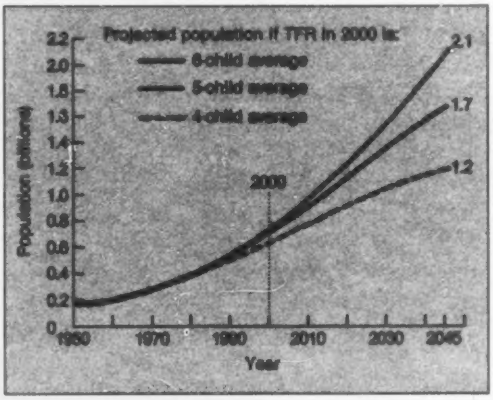
That an unmet demand for family planning services exists in sub-Saharan Africa is clear. However, the existence of this demand can often catch observers in a "looking up–looking down" trap. For example, if prevalence rates for modern contraception rose from their present levels of about 4 percent to 14 percent by 2000, then about 22 million women would be using modern contraception—five times the number in the 1980s. Many observers effusively insist that African women are "ready" for family planning, that the demand for services exists.

Yet, as suggested from the above analysis, were one "looking down" from the encompassing perspective of overall demographic trends, the picture would appear different. An increase to a 14 percent prevalence rate by the year 2000 would have only a minimal impact on fertility levels and population growth rates would remain very high. The rapid expansion of family planning service systems in the sub-Saharan region will not necessarily mean significant fertility decline, especially in the near term.

The Timing of Fertility Decline

The timing of the fertility decline is crucial. The question is not whether African fertility is going to decline; it inevitably will. Indeed, historians may well decide that fertility was already beginning to decline in the late 1980s. The more useful question is: Will fertility decline in the near future be substantial enough to affect significantly population growth rates over the next 10 to 15 years?

Figure 8. Timing of Fertility Decline and Future Growth, Sub-Saharan Africa



Source: World Bank, 1986.

The 1990s are truly critical for the demographic and the development future of Africa. The extent and pace of fertility decline over this decade, if any, will have a radical impact on the future. If the total fertility rate (TFR) remains above 6 until the year 2000, the sub-Saharan population could reach 2.1 billion by 2045, according to World Bank projections. If it drops to 5.2 by the end of this century, the 2045 population would be nearly one-half billion lower (see Figure 8). If the TFR drops closer to a 4-child per woman average by 2000, the population in 2045 would be 1.2 billion persons. The difference between the high and low projections equals almost 900 million persons by 2045, or about double the 1985 population size of the sub-Saharan region.

No doubt exists that there is an unmet demand for family planning services in Africa and that this demand will increase over time. But the cultural underpinnings of high fertility in sub-Saharan Africa remain powerfully strong and change slowly. The ability to expand family planning programs rapidly is limited, and in a time of economic malaise, the competition for scarce resources is intense. And many African governments still have to commit themselves unequivocally to lower rates of population growth as a fundamental component of social and economic development. Yet, African countries have achieved much with limited resources in the past—for example, the rapid expansion of primary school enrollments in the post-independence period—and the beginnings of a transition to a new regime of demographic behavior may already exist.

Policy Options

Practical measures to reduce birth rates, especially in rural Africa, can be divided into four areas: (1) measures to help create a demand for smaller families; (2) measures which contribute to a widespread social acceptance of family planning; (3) programs which actually extend family planning services; and (4) activities which affect the cultural or economic determinants of fertility, especially age of marriage and breastfeeding.[61]

Creating a Demand for Smaller Families

Social and economic change is undoubtedly central to any hope of increasing demand for smaller families and achieving fertility reduction. Lower infant and child mortality rates, rising and more equitably distributed incomes, higher levels of education, more economic and social opportunities for women, and greater security would all serve to provide a climate more conducive to fertility decline. Of these, increased educational and economic opportunities for women may have the greatest effect.

Promoting Family Planning

An important component of policy activities in Africa will be to make couples aware of means to control fertility and to make it socially acceptable to use these methods—what the World Bank terms building a consensus on the legitimacy of family planning. Information programs should (1) emphasize the benefits of family planning, both in terms of the health of mothers and children and the social and economic development of the region; and (2) describe alternative contraceptive methods, how to use them, and where to obtain them. Information is also needed on the advantages of breastfeeding and longer birth intervals.

To build the needed consensus, information should be aimed at current and potential family planning users and at political and community leaders, such as traditional chiefs, parliamentarians, religious leaders and senior medical personnel. The mass media and the schools can also be used to deliver population messages to more general audiences. As the social acceptance of family planning increases, the opportunities to achieve higher prevalence rates and lower fertility will be enhanced.[62]

Expanding Family Planning Services

Family planning programs to provide modern contraceptive methods have been instrumental in reducing fertility rates in other developing regions. Family planning services can be delivered through a number of mechanisms. Some government programs integrate services in maternal and child health or basic health care programs. In these programs, family planning is offered at clinics or health posts that also provide other health services.

In Africa, family planning services are rarely fully integrated into the health system. In other parts of the developing world, freestanding clinics which provide only family planning and related services have been used; however, given the poor condition of other health services, it is unlikely that extensive freestanding systems will be developed in Africa.

Zimbabwe does use a separate family planning system but utilizes an extensive network of outreach workers who visit clients in the *kraals* and villages. The Zimbabwean community-based distribution approach has been relatively effective for the African setting but it is comparatively expensive and may be difficult to emulate in other countries.

While private and commercial efforts

can reach a significant proportion of the population in urban areas, government programs will be necessary to expand family planning services into rural Africa where most people live. This will probably be achieved by grafting family planning services on the present health infrastructure rather than developing independent family planning delivery systems.

National family planning associations are the most active and prominent nongovernmental providers of family planning services in Africa. At least 25 countries in the region now have national family planning associations which are affiliated with and receive support from the International Planned Parenthood Federation (IPPF), a nonprofit, nongovernmental organization based in London. Many of the national family planning associations work in close conjunction with their governments.[63] The Uganda Family Planning Association, for example, often uses Ministry of Health facilities for its clinics and, in fact, provides government family planning services.

Women's groups, churches, unions, private physicians and other groups also help deliver family planning services in various parts of Africa. Taken together, they are potentially an important source of services. In other parts of the developing world, employers in factories and on plantations have been encouraged to include family planning as part of their institutional health care program. This approach is also now being used in Africa. For example, major oil companies in Nigeria have taken a lead in providing family planning services to employees. Large employers, however, engage only a small proportion of the African labor force and this approach by itself is likely to have only a minimal effect on fertility.

Social marketing of contraceptives is being introduced in some African countries. Social marketing groups or governments provide contraceptives, most often pills or condoms, at subsidized prices to pharmacists and other distributors who in turn are allowed to sell them for a profit. The price is kept low enough to keep the products accessible to low- and middle-income groups.

The commercial distribution of contraceptives through social marketing has certain advantages in the African context. An extensive network of shops and pharmacies already exists in most countries. Use of the private sector permits contraceptive distribution while bypassing sometimes cumbersome and inefficient public bureaucracies.

At the same time, social marketing tends to be more successful in urban areas and less so in rural regions. For the most part, social marketing programs seem to have been most successful in countries which have already started the demographic transition towards lower fertility; how they will fare in poor, high fertility African nations just beginning a demographic transition is an unknown.

Most of the social marketing programs in the sub-Saharan region—in Zimbabwe, Ghana, Nigeria, and elsewhere—are new and their impact cannot yet be evaluated. The Ghana program appears to have helped increase condom use. However, condoms are often used in urban areas from fear of sexually transmitted diseases and AIDS and not directly for family planning.

Delaying Marriage, Promoting Breastfeeding

In other world regions a rise in women's average age at marriage helped reduce fertility even when desired family size is high. While legislation to raise the legal marriage age would be difficult to enforce in sub-Saharan Africa, rewards, such as increased schooling opportunities, could be offered to women who delay marriage.

A few countries have raised the minimum age for marriage. In Togo, girls may not marry before age 17 and in Côte d'Ivoire, age 18. The importance of marriage age was recognized by national leaders at the Second African Population Conference, who resolved that "national programs, especially in education,

USAID/Dolores Weiss

A Liberian girl studies her lessons. Girls who stay in school are more likely to delay marriage.

should aim at raising the age at marriage."[64]

Breastfeeding, which reduces fecundity, is now declining in urban and some rural areas. Governments could counter this trend by providing information to mothers on the contraceptive effects of breastfeeding, as well as its important role in infant survival.

Other Program Issues

If a variety of family planning service delivery alternatives must be tried, so too must a "cafeteria" of alternative contraceptive methods be made available. Oral contraceptives (pills) are by far the preferred alternative among current users of modern contraception. Pill use requires a consistent monthly pattern which may constrain their use among illiterate, rural populations. Injectibles, especially Depo-Provera, are popular because they provide three months of protection with a single shot. However, Depo-Provera is not approved by the Food and Drug Administration for use in the United States which makes its use in developing countries controversial. Intrauterine devices (IUDs), popular in some Asian programs, are not widely used in Africa. Other female methods, such as diaphragms or foaming tablets, are often difficult to use hygienically in African settings and are not popular. Condoms have not been used much until recently when increased fear of AIDS and sexually transmitted diseases spurred a surge in use. Male or female sterilization, an important component of some successful Asian programs, is negligible in Africa. Some observers believe that sterilization is so inimical to African values and cultural beliefs that it cannot play a significant role in the newly emerging programs.

Because of the limited demand, the weakness of family planning programs operating so far, and the traditional social and economic milieu, African leaders insist that great sensitivity must be shown in implementing programs. Fred Sai argues: "The only way to have meaningful population and family planning programs is to put the programs firmly within people-oriented development programs and activities."[65]

There is agreement on one issue in country after country, even among those most worried about high birth rates: programs must be strictly voluntary. Most experts agree that any measures that even imply coercion must be rejected, not only because they would be contrary to African cultural values but also because they could discredit the programs.

Conclusion

"At no time in history," reports the World Bank, "has any group of nations faced the challenge of development in a situation of such rapid population growth."[66] In combination with stagnating economies, this imposing demographic reality has led African governments to consider and in some cases adopt new policies designed to reduce high fertility and high population growth rates. The 1990s will test the depth of this political commitment, as well as the practicable ability to implement new programs, increase contraceptive prevalence, and lower birth rates. Passage of this challenge will be one important factor determining whether a new Africa can emerge in the 21st century, one free from hunger, disease, illiteracy, unemployment, and poverty.

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Discussion Points

1. Discuss the challenges that countries of sub-Saharan Africa face as they modernize. How do their challenges compare to those countries that modernized earlier (i.e. Japan and the U.S.)?

2. Outline the demographic changes experienced by sub-Saharan Africa in the past 30 years. (Consider birth rate, death rate, natural increase, life expectancy, infant mortality, etc.) Compare sub-Saharan Africa to Latin America today and to Latin America 25 years ago.

3. Discuss the prospect for population growth in sub-Saharan Africa. How will AIDS affect future population growth in the region and in particular countries?

4. How is the transmission of AIDS in Africa different than in other parts of the world? Are Africans more susceptible to the disease? If so, why?

5. It is often said that rapid population growth is the cause of declining per capita food production in Africa. Do you agree?

6. What are some of the push and pull factors associated with rural-to-urban migration in sub-Saharan Africa? Are migration patterns in Africa similar to those in other regions?

7. Sub-Saharan Africa now has the highest fertility in the world. Describe some of the factors that work to keep fertility high in this region. What are the prospects for fertility decline?

8. How do families and communities support large families? What are some of the positive and negative results of these practices?

9. Why have African leaders changed their views on population growth? Review the development of population policies in the 1980s.

10. How do the policy options described by the author incorporate improvement in women's status?

Prepared by Kimberly A. Crews

Africare

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POPULATION BULLETIN
Vol. 44, No. 4, December 1989

American Education: The Challenge of Change

By Jeanne E. Griffith, Mary J. Frase,
and John H. Ralph

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Abstract—The American education system is being challenged to raise the academic achievement of students to prepare them for the jobs of the future. Yet many demographic, as well as economic and social factors are making that task more difficult.

Low births rates, especially among non-Hispanic whites, along with high immigration rates have increased the share of minority and non-English-speaking students in public schools. The rise in single-parent families has increased the number of poor students and migration from the cities to the suburbs has concentrated poor and minority students in inner city schools. These same children will make up a greater share of the future labor force. At the same time, the aging of the general population may lessen the commitment of homeowners—whose taxes pay between one-third and one-half of education costs. The aging labor force may bring a shortage of qualified teachers, particularly in specialized subject areas.

Poor and minority students generally have below average academic skills and are more likely to drop out of high school than non-minority students. However, the skills of American students rank below those of most other industrialized nations, calling into question the ability of Americans to succeed in an increasingly international economic system.

How can schools be improved and minority student achievement enhanced? Reforms of education finance systems, court-ordered integration, and stiffer requirements for teachers and for graduation from high school are among many attempts to meet the immense challenges faced by American schools.

Editor: Mary Mederios Kent
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Graphics: Type & Graphics, Inc.

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The suggested citation, if you quote from this publication, is: Jeanne E. Griffith, Mary J. Frase, and John H. Ralph, "American Education: The Challenge of Change," *Population Bulletin*, Vol. 44, No. 4 (Washington, D.C.: Population Reference Bureau, Inc., December 1989). For permission to reproduce substantial portions from the *Population Bulletin*, write Population Reference Bureau, Inc., Permissions, 777 14th Street N.W., Washington, D.C. 20005.

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The *Population Bulletin* is indexed in *GEO Abstracts, PAIS Bulletin Population Index, Social Sciences Index*, and *Social Sciences Citation Index*. It is included in the coverage of *Current Contents/Social and Behaviorial Sciences*, Biosciences Information Service of Biological Abstracts and the CICRED/UNFPA *Review of Population Reviews*, and is available in microform from University Microfilms Inc., 300 North Zeeb, Ann Arbor, MI 48106. Selected *Bulletins* are also included in the coverage of and are available on microfiche through ERIC Systems.

American Education: The Challenge of Change

By Jeanne E. Griffith, Mary J. Frase, and John H. Ralph

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POPULATION BULLETIN
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The changing demographic characteristics of American students are challenging the educational system.

American Education: The Challenge of Change

By **Jeanne E. Griffith, Mary J. Frase,** and **John H. Ralph**

Jeanne E. Griffith serves as the Acting Associate Commissioner for Data Development at the National Center for Education Statistics, U.S. Department of Education. She received her Ph.D. in sociology from the Johns Hopkins University in 1984. Formerly, Dr. Griffith was a demographic specialist for the Congressional Research Service and, at the Office of Management and Budget, was responsible for the oversight of federal demographic statistical programs.

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Elementary and secondary education is a big enterprise in the United States—involving nearly one of every four Americans. In 1987–88, there were an estimated 45.4 million students, 2.6 million teachers, and 2.2 million additional staff involved in the education system. Public expenditures for education—an estimated 309 billion dollars in 1988—consume about the same level of resources as national defense. The massive outlays of financial and human capital have been supported by the American people because of the importance attached to education: The schools prepare the young to fill adult roles as workers, informed citizens, and parents of the next generation.

As we enter the 1990s, many question the ability of the American education enterprise to meet even these basic goals as economic policies tighten school budgets, the supply of qualified teachers seemingly dwindles, and the percentage of poor and minority children increases. At the same time, schools are asked to turn out more educated entry-level workers for the labor force of the future.

More than most other public services, education is inextricably linked to demographic trends. The number of children determines the size and nature of the schools; fluctuations in student enrollment affect the number and age profile of the teachers. The education system was overburdened during the 1950s and 1960s when the post-World War II baby

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The views expressed in this *Bulletin* are those of the authors and do not represent the views or policies of the U.S. Department of Education.

boomers reached school age. Then, declining enrollments during the 1970s and early 1980s closed some schools and consolidated others. More recently, several demographic trends have affected the American educational system. High rates of immigration, combined with low birth rates among white non-Hispanics, have increased the proportion of minority students in the schools. Persistent urban poverty and the movement of the middle class families to the suburbs have concentrated poor, minority students in central cities. An underclass, characterized by long-term poverty and alienated from mainstream society, appears to be emerging—and their children comprise an increasing share of U.S. students.

Population shifts out of the economically depressed areas in northeastern and central states to the south and west have caused enrollments to swell in some areas and fall in others. And, whether enrollments go up or down, the cost of educating students appears to be increasing.

The share of the elderly in the U.S. population is increasing and the priorities of these older individuals for public spending often compete directly with education. In addition, the composition of homeowners—who pay for a large proportion of school costs through their property taxes—is changing. Nonfamily households are projected to increase by 40 percent between 1985 and 2000; married-couple households by only 12 percent. A greater proportion of households will either be childless (with limited personal interest in local schools) or consist of single-parent families (and have a greater likelihood of being poor). Neither group is likely to be avid supporters of property tax increases to fund the school systems.[1]

Further, many Americans question the efficacy of education programs and the wisdom of educators. A number of factors contribute to this concern: disappointing test results; escalating costs; debates over such social issues as desegregation, sex education, and prayer in schools; teacher strikes; a general decline of trust in public officials; and low academic standards.

NEA/Joe Di Dio

In the 1990s and beyond, more jobs will require at least a high school education.

There is also a growing concern, voiced by business, government, and academia, that American students in the 1980s and 1990s will not be adequately prepared to meet the labor force needs of the 21st century. Numerous studies, such as *Workforce 2000* by the Hudson Institute, predict that the jobs of the future will require more technical knowledge and higher levels of literacy than in the past. The U.S. Department of Labor projects that 30 percent of the new jobs in the 1990s will require a college degree, compared to about 22 percent at the end of the 1980s. Over the same period, jobs available to high school dropouts will fall from 18 to 13 percent. Workers will need to be more flexible—possessing the basic skills necessary to undergo retraining—because they will probably change jobs several times during their careers. Thus, amid the complaints that educational levels are deteriorating, comes a loud call for improving the educational achievement of American students.

The need for raising the skill levels of all students is further emphasized by the fact that fewer new workers will enter the job market in the next two decades. Just as the baby boom provided a surplus of entry-level workers in the 1970s and 1980s, the "birth dearth" generation that followed it siphoned off the surplus. In 1980, persons 18 to 24 comprised 22 percent of the U.S. labor force, but by the year 2000, that percentage will fall to about 15 percent. Business will no longer be able to pick the best and ignore the rest. With fewer new entrants, the productivity of available workers must increase.

Immigrants and native-born minorities will make up about 40 percent of the entry-level workers in the coming decades. Thus, the national call to increase the basic achievement of minority students has a solid economic justification.

This report examines the challenges to the American elementary and secondary education system brought about by the demographic changes over the past few decades, and looks at prospects for improvements from current reform movements. An overriding concern is the lagging performance of disadvantaged students, who comprise a growing share of school enrollments and the future labor force.

The Goals of Education

The function of education is to prepare each generation for participation in the world of work and responsibility by transmitting the knowledge, attitudes, and culture of the adult world to the young.

Education produces both public and private benefits. The private benefits are those that students derive from education—higher incomes, better jobs, and the personal enjoyment of learning. The public benefits include economic growth through higher productivity and lower unemployment rates, reduced need for public assistance, and lower crime rates. Furthermore, in pluralistic societies such as the United States, schools serve to assimilate new immigrants and to instill the cultural and political values that underlie a democratic form of government.

Schools are also gatekeeping institutions: youngsters leave school with varied prospects for employment, military service, and further schooling based on differences in school performance (for example, grade point averages or test scores) and in school attainment (years of schooling and credentials earned).

Rising Levels of Education

Since the early part of this century, more and more young adults have succeeded in completing at least a high school education. In 1920, only about one-fifth of the nation's 25-to 29-year-olds had completed high school; by 1950, that figure had increased to just over half, and by 1988, to 85.9 percent. Until recently, there were dramatic differences between blacks and whites: in 1920, 22 percent of whites had completed high school, but only 6 percent of blacks and other races had done so. Even in 1960 the differences were stark—only 39 percent of non-whites had completed high school compared to 64 percent of whites. By 1988, the gap between the races had almost disappeared: high school completion rates were 86.4 and 83.3 percent, for whites and blacks, respectively.[2] However, there is a continued racial gap in test scores and college attendance.

While the share of youth completing a high school education has been growing, the share of high school graduates continuing on to college has increased little since the late 1960s. In fact, there was a slight decline between the late 1960s and the early 1980s, and then a gradual increase through 1986 when it reached 34.4 percent.

College participation rates among minority youth who have completed high school have been declining since the mid-1970s. The share of black high school graduates going on to college peaked at 33.5 percent in 1976, decreased to 26.1 in 1985, and increased slightly to 28.6 in 1986. Among Hispanics, the share of high school graduates enrolled in college declined from a high of 35.8 percent in 1976 to a low of 26.9 in 1985.[3]

Rewards from Education

There are substantial monetary returns to graduation from high school and attending college. However, many other factors—including personal characteristics, economic conditions, and the demand for workers—affect how much benefit each additional year of education brings an individual.

Crystal Images

Schools are being asked to improve the performance of American students.

During the 1970s, the income advantage gained from finishing high school and going on to college declined.[4] There was a glut of college-educated entry-level workers in the 1970s. In addition to general economic conditions, this oversupply resulted from relatively high college attendance rates among the large baby boom generation. These declines in the wage gap by education may have been at least partially responsible for the drop in the share of high school graduates attending college noted above. During the 1980s, the financial benefits of

Table 1. Average Annual Earnings by High School Graduation Status, Sex, and Academic Skill Level, for Americans Ages 20-23 in 1981

	Earnings in 1979-80			
	Males		Females	
Academic Skill Level (Quintile)	Dropouts	Graduates	Dropouts	Graduates
Lowest	$ 4,616	$ 6,013	$ 1,429	$ 2,936
Second lowest	6,595	8,639	2,156	4,235
Middle	6,765	8,190	3,102	4,629
Second highest	8,321	9,433	2,465	5,469
Highest	9,086	10,738	4,146	6,003

Source: National Longitudinal Survey of Young Americans, cited in Gordon Berlin and Andrew Sum, "Toward a More Perfect Union: Basic Skills, Poor Families, and our Economic Future," Occasional Paper No. 3, Ford Foundation Project on Social Welfare and the American Future (New York: Ford Foundation, February 1988) p. 11.

college improved markedly, probably a reflection of the rising demand for educated workers. By 1986, the differences in weekly wages of young high school and college graduates approached 70 percent.[5]

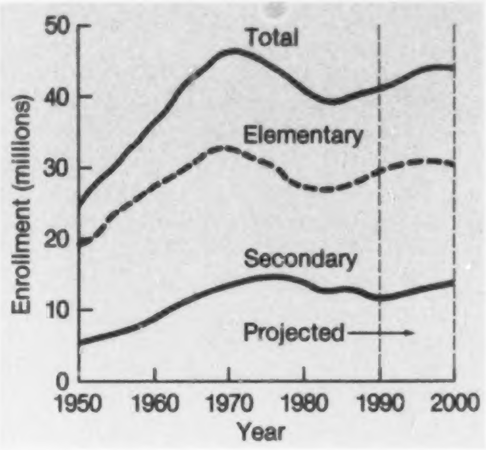
Beyond demographic trends and economic conditions, individual factors also affect returns to education. Educational attainment clearly affects an employee's starting level and wage, but with time, employers are better able to gauge an individual's skills and abilities. And skills, as reflected in achievement test data, also appear to affect earnings. Attaining a high school diploma pays off: male graduates at the second lowest academic-skills level earned more than dropouts at the second highest level, as Table 1 shows. But within the groups of graduates and dropouts, individuals who showed higher academic skills clearly were rewarded with more pay. Future earnings appear to be related not only to whether an individual succeeds in graduating, but also to how well he performs in school.

Thus, while schools have been graduating a greater proportion of students, many question how well they are being educated, and whether a high school diploma stands for less than in the past. But an assessment of the educational status of the average American must be examined within the context of the changing makeup as well as the numbers of the school-age population.

Students—Demographic Profile

In fall 1988, 45.4 million children were enrolled in elementary and secondary schools in the U.S. This is far less than the peak of 51.3 million public and private school students in 1970 and 1971, but reflects increases in enrollment every year since 1984 (see public school trends in Figure 1).

Figure 1. Student Enrollment in Public Elementary and Secondary Schools, 1950-2000



Note: Excludes private school students, who comprise 8 to 12 percent of all U.S. students.

Source: National Center for Education Statistics.

Most children attend public schools. In 1988, only 5.2 million students, or 11.5 percent, were in private schools. The share of students in private schools has fluctuated slightly throughout this century, but generally has stayed within the range of 8 to 12 percent.

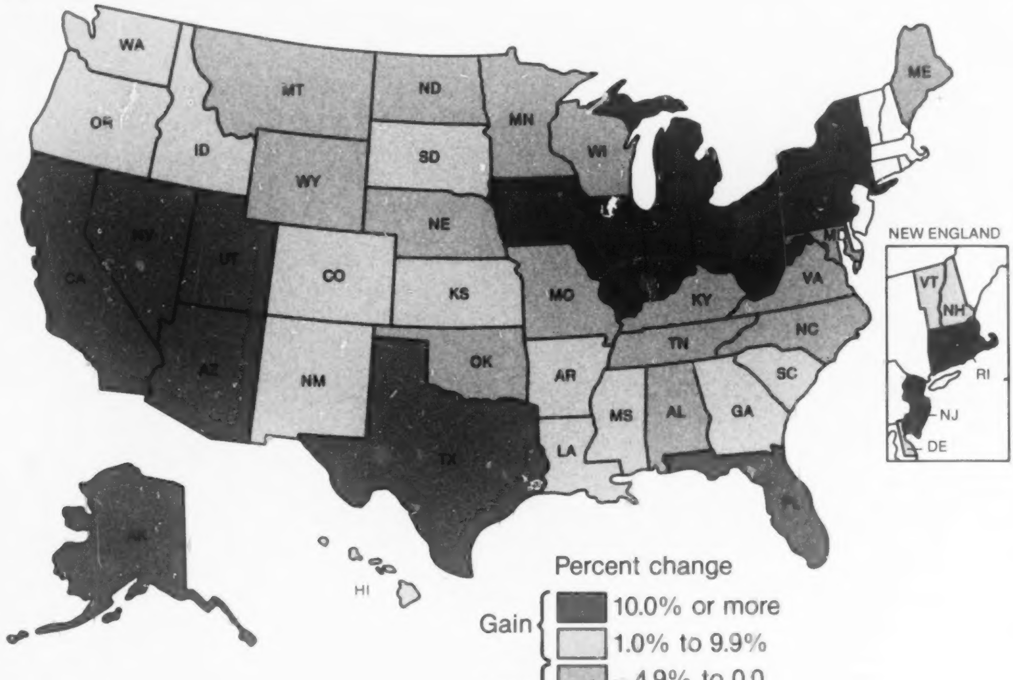
With nearly universal enrollment of American children, fluctuations in annual enrollment are driven by trends in the number of births. During the height of the post-World War II baby boom, between 1954 and 1964, the number of annual births in the United States exceeded 4 million. The U.S. birth rate began a steady decline after 1964 which continued until 1975—the birth dearth period. In 1975, only 3.1 million babies were born, but annual births increased nearly every succeeding year up to 1988, when 3.9 million births occurred.[6]

Following the trends in births, elementary enrollments began to decline after 1969, when the first of the baby bust cohorts reached school age, and began to edge back up in 1985. Between 1985 and 1988, elementary enrollment grew by 3.8 percent, to 32.4 million students. Enrollment is expected to continue its ascent until about 1996. The number of secondary students, in decline since 1977, is expected to continue to fall through 1990, after which the larger numbers of elementary students will begin to enter the higher grades. Secondary enrollment fell 5.9 percent between 1985 and 1988, to 13.0 million, but is expected to increase to 14.0 million by 1995 and to 14.8 million by 2000.

At state and regional levels, the fluctuations in enrollments have not followed national trends (see Figure 2). While the national public school enrollment figures for kindergarten through 12th grade rose by only 0.2 percent between 1981 and 1988, enrollment increased by 10 percent or more in seven states, including a 20 percent increase in Utah, 16 percent in Florida, 14 percent in California and Arizona, and 11 percent in Texas. States whose total population declined due to net outmigration during the 1980s also experienced declines in student enrollment. Five states (Massachusetts, Michigan, New Jersey, Pennsylvania, and West Virginia) lost 10 to 12 percent of their public school enrollment between 1981 and 1988.

In addition to swings in the number of students, several changes in the characteristics of children and families have presented major challenges to the educational system in recent decades. Most of these trends will intensify during the 1990s. Among these are:

Figure 2. Change in Public School Enrollment by State, 1981–1988



Source: National Center for Education Statistics, *Digest of Education Statistics, 1989.*

Box 1. Education and the American Underclass

Educating the children of the underclass poses seemingly intractable problems for the U.S. education system. Although definitions vary, the underclass, distinguished from the poor in general, are characterized by long-term joblessness and poverty, marital instability, single-parent families, intergenerational welfare dependency, criminal behavior, and habitual substance abuse. In contrast, much of the U.S. poverty population lives in two-parent families, is employed (though at low wages), or is retired, and has stronger ties to the economy and society.

While *racial* segregation declined in many metropolitan areas following the civil rights legislation of the 1960s, increasing *economic* segregation has served to isolate minority children in the poorest schools and neighborhoods. Among other factors, this growth of the underclass in central cities has been intensified by the influx of poor immigrants, especially Hispanics, and the outflow of the more stable, middle-class black and white families to the suburbs.

There is considerable controversy about how effective schools can be in the face of home environments that provide little support for a child's well-being and education. The Committee on Economic Development concludes that both the school and family have become too frail to handle these tasks, and suggests that the combined efforts of many groups—including schools, businesses, community organizations, and governmental institutions at all levels—will be required.

Efforts to raise the standards of the schools in general may be in conflict with efforts to deal with the particular problems of the underclass. "Increasing concern about the overall quality of the nation's schools has altered federal and state education policy priorities, and this shift has brought a lessening of federal support, an increase in state-level initiatives, and new policies aimed more toward improving the education system generally than at solving the problems of the poorest urban schools."[1]

Many programs that do target the underclass focus on early childhood programs like Head Start, social support programs, cooperative partnerships with external institutions, and efforts to increase the effectiveness of schools, their curricula, and teachers' instructional skills.

Reference

1. **Oakes, Jeannie, *Improving Inner-City Schools: Current Directions in Urban District Reform* (Santa Monica, California: RAND Corporation, October 1987) p. v.**

- Increases in the minority share of the school-age population.
- Increases in the percentage of children living in poverty.
- Increases in the percentage of children who live in single-parent families for some or all of their childhood.
- Growth in the percentage of children born to unwed mothers—particularly in minority populations.
- Growth in the number of children whose mothers work outside the home.

Race, Ethnicity, and Poverty

Historically, blacks and Hispanics have had much higher rates of poverty, less stable family lives, lower educational attainment, and a more tenuous labor force attachment than white non-Hispanic Americans. In 1988, 44 percent of black and 38 percent of Hispanic children under age 18 were living below poverty, compared to 15 percent of white children.[7]

Children from these disadvantaged minorities are more likely to be at risk of educational failure.[8] Although there is tremendous variation within racial and ethnic groups, in general, minority children are more likely to perform poorly on cognitive measures, to have attendance problems, to present disciplinary problems in school, to have poor health, to have learning disabilities, to use illegal drugs and alcohol, to become pregnant, and to drop out of school.

Because of relatively higher minority birth rates and increasing immigration, the share of minority children in the U.S. is increasing rapidly. In 1970, 13.5 percent of the school-age population (aged 5 to 17) was black. By 1985, it reached 14.9 percent and demographers project an increase to about 16 percent by the year 2000. The Hispanic population is increasing even more rapidly. In 1985, 9.6 percent of the school-age population was Hispanic, and the Hispanic share could reach 16 percent by 2000. Because white non-Hispanics are growing more slowly than other groups, their share of the total school-age population will decrease from about 73 percent in 1985 to around 66 percent by 2000.[9]

The size and proportion of minority enrollment varies tremendously by state and even more dramatically among metropolitan areas. California is the most ethnically diverse state; in 1986, only 54 percent of the public elementary and secondary students were white non-Hispanics, while 9 percent were black, 28 percent Hispanic, 9 percent Asian and Pacific Islander, and 1 percent American Indian (see Table 2). Due to continuing immigration from Asia and higher fertility among Hispanic women, the share of Asians and Hispanics is expected to increase in the coming decades.

Reflecting the general racial and ethnic makeup of state populations, the southern states tend to have the largest proportion of black students, the southwestern states the largest proportion of Hispanics. In 1986, black children accounted for 56 percent of the public elementary and secondary enrollment in Mississippi, 45 percent in South Carolina, 41 percent in Louisiana, 38 percent in Georgia, and 37 percent in Alabama. Blacks made up roughly one-quarter to one-third of the public enrollment in seven other states (Arkansas, Delaware, Florida, Maryland, North Carolina, Tennessee, and Virginia). The proportion of black students in these states is likely to increase because of the movement of blacks into the South from other regions. The proportion of American blacks living in a southern state increased from 52 to 56 percent between 1980 and 1988.[10]

Many central city school districts are overwhelmingly black. Over several decades, the movement of white and more recently black middle-class families from cities to the suburbs has served to concentrate poor minority children in central cities. In 1986, 91 percent of public school children in the District of Columbia were black, as were 88 percent of students in Detroit in 1989. In the New York City public schools, 38 percent of the 1988 enrollment was black. The racial makeup of the school-age population in many cities is different from that of the general population, a reflection of the young age distribution of minority residents who make up a disproportionate share of central city populations.

Nearly 80 percent of the U.S. Hispanic population is concentrated in only 9 states, and these same states have the largest percentage of Hispanics in their schools. As a percentage of total 1986 enrollment, the Hispanic share is highest in New Mexico (45 percent), Texas (33 percent), California (28 percent), Arizona (26 percent), Colorado (14 percent), and New York (12 percent). In the San Antonio, Texas, Independent

Table 2. State Enrollment by Race/Ethnic Group, 1986*

	1986 Enrollment (in thousands)	Percent distribution by race and ethnic group					
		Total	White Non-Hispanic	Black	Hispanic	Asian and Pacific Islander	Amer. Indian/ Alaskan Native
United States	39,837	100	70	16	10	3	1
Alabama	734	100	62	37	z	z	1
Alaska	108	100	66	4	2	3	25
Arizona	535	100	62	4	26	1	6
Arkansas	437	100	75	24	z	1	z
California	4,378	100	54	9	28	9	1
Colorado	558	100	79	5	14	2	1
Connecticut	469	100	77	12	9	2	z
Delaware	94	100	68	28	3	1	z
District of Columbia	86	100	4	91	4	1	z
Florida	1,607	100	65	24	10	1	z
Georgia	1,096	100	61	38	1	1	z
Hawaii	165	100	24	2	2	72	z
Idaho	208	100	93	0	5	1	1
Illinois	1,825	100	70	19	9	2	z
Indiana	967	100	89	9	2	1	z
Iowa	481	100	95	3	1	1	z
Kansas	416	100	86	8	4	2	1
Kentucky	643	100	89	10	z	1	z
Louisiana	795	100	57	41	1	1	z
Maine	212	100	98	1	z	1	z
Maryland	676	100	60	35	2	3	z
Massachusetts	834	100	84	7	6	3	z
Michigan	1,682	100	76	20	2	1	1
Minnesota	711	100	94	2	1	2	2
Mississippi	499	100	44	56	z	z	z
Missouri	801	100	83	15	1	1	z
Montana	153	100	93	0	1	1	6
Nebraska	267	100	91	4	2	1	1
Nevada	161	100	77	10	8	3	2
New Hampshire	164	100	98	1	1	1	z
New Jersey	1,107	100	69	17	11	3	z
New Mexico	282	100	43	2	45	1	9
New York	2,608	100	68	17	12	3	z
North Carolina	1,085	100	68	29	z	1	2
North Dakota	119	100	92	1	1	1	5
Ohio	1,794	100	83	15	1	1	z
Oklahoma	593	100	79	8	2	1	11
Oregon	449	100	90	2	4	2	2
Pennsylvania	1,674	100	84	13	2	1	z
Rhode Island	134	100	88	6	4	2	z
South Carolina	612	100	55	45	z	1	z
South Dakota	125	100	91	1	1	1	8
Tennessee	818	100	77	23	z	1	z
Texas	3,210	100	51	14	33	2	z
Utah	416	100	94	z	3	2	2
Vermont	92	100	98	z	z	1	1
Virginia	975	100	73	24	1	3	z
Washington	761	100	85	4	4	5	2
West Virginia	352	100	96	4	z	z	z
Wisconsin	768	100	87	9	2	2	1
Wyoming	101	100	91	1	6	1	2

*Public elementary and secondary schools

z = less than 0.5 percent

Source: National Center for Education Statistics, *Digest of Education Statistics, 1989.*

School District, Hispanics made up 81 percent of total enrollment in 1989, and in the New York City Schools in 1988, 34 percent.

There has also been a large increase in the number of Asian school-age children since the late 1970s primarily due to immigration from Southeast Asian countries, although the numbers are small relative to blacks and Hispanics. Between 1976 and 1986, Asian student enrollment in public schools increased from 535,000 to over 1 million. Although Asian students accounted for only 2.8 percent of the 1986 national enrollment, they are a major presence in some metropolitan areas. In Arlington, Virginia, for example, an influx of immigrants increased the enrollment of Asian students fourfold between 1970 and 1985. The Asian share of the student body rose from 1.9 to 14.6 percent over that time period, although it later declined, to 12 percent in 1988.[11] In San Francisco, 47 percent of the public school children were Asian or Pacific Islander in December 1989. The largest subgroups of Asian students in that city were Chinese (24 percent) and Filipino (13 percent).[12]

A large share of Hispanic, Asian, or other immigrants usually means a large share of non-English-speaking students. In the Los Angeles Unified School District in 1987, 93 different languages were spoken among the student body. In three area high schools (Grant, Belmont, and Hollywood), at least 21 languages were represented. In 1989, 38 percent of the elementary students in the Los Angeles County public schools were enrolled in English as a Second Language (ESL) classes. In Arlington, Virginia, about 16 percent of the school children were enrolled in ESL classes in 1989. Not only are special language courses costly, but ESL children miss out on some proportion of the regular classroom instruction while they are in language class.

Trends in Family Life

All too frequently teachers must serve as "parent surrogates" to children in their charge for just a few hours a day. Some of the recent trends in family life—increases in single-parent families and in out-of-wedlock births—are not necessarily supportive of the development and education of our youth. The increase in the proportion of children whose mothers work outside the home has also placed strains on the educational system.

Single-Parent Families. More children than ever before are living in single-parent families for at least part of their lives. This has important consequences for education because single-parent families are more likely to be headed by a woman and to be poor than families with two parents.

High rates of divorce and marital dissolution, combined with relatively greater fertility declines among married than unmarried women,[13] have increased the share of children living with only one parent, usually the mother. From 1970 to 1985, the share of children under 18 living with only one parent more than doubled, from 11.9 to 24.3 percent. Among white children under age 18 in 1988, 18.9 percent lived in single-parent families; among Hispanics, 30.2 percent; and over one-half (54.1 percent) of black children, lived with a single parent, 51 percent with their mother (see Table 3). Also in 1988, 45 percent of the families with children headed by a woman were living in poverty, compared to only about 7 percent of married-couple families with children.

Teenage Parents and Out-of-Wedlock Births. Both the rates of birth and number of births to teenage mothers have declined since the 1950s; however, the share of teen births to unmarried women has increased in recent decades. Among younger teens (15 to 17), birth rates

Table 3. American Children in Single-Parent Families by Race, 1988

	Total		White		Black		Hispanic[1]	
	Number (millions)	Percent	Number (millions)	Percent	Number (millions)	Percent	Number (millions)	Percent
Total children under 18	63.2	100.0	51.0	100.0	9.7	100.0	6.8	100.0
Living with:								
Two parents	45.9	72.7	40.3	78.9	3.7	38.6	4.5	66.3
One parent	15.3	24.3	9.6	18.9	5.2	54.1	2.0	30.2
Mother only	13.5	21.4	8.2	16.0	5.0	51.1	1.8	27.2
Father only	1.8	2.9	1.5	2.9	0.3	3.0	0.2	3.0
Other arrangements	1.9	3.0	1.1	2.2	0.7	7.4	0.2	3.6

[1] Hispanics may be of any race.

Source: U.S. Bureau of the Census, "Marital Status and Living Arrangements: March 1988," *Current Population Reports*, Series P-20, No. 433 (Washington, D.C.: March 1988).

declined by 31 percent, and among older teens (18 and 19), by nearly 49 percent between 1955 and 1986.[14] The aging of the huge baby boom population has reduced the share of all births to teenage mothers. In 1970, when the bulk of the baby boom was in its teen years, 17.6 percent of all births were to teens; by 1985, when the baby bust generation began to enter its teens, that figure had declined to 12.7 percent.[15] However, the birth rates for unmarried teenagers have increased in the 1980s, as they have for unmarried women of all ages.

The problems of teenage childbearing are multi-faceted. The unmarried teenage mother is far more likely to drop out of school or not continue beyond high school and to spend more of her life as a single parent.[16] Compared to those who wait to begin families, the teen mother is economically and socially disadvantaged from the start. The relative disadvantage of teen mothers has widened over time because, on average, today's young women go to school longer, enter the labor force when they leave school, and stay in the labor force through their childrearing years.

From the child's perspective, the disadvantages are particularly distressing. The teen mother is less likely to have well-developed parenting skills and the child is more likely to suffer all the consequences of a disadvantaged childhood (poverty, inadequate access to health care, a lack of positive role models, or a lack of parental guidance). These children are more likely to live in poverty as adults, perpetuating the cycle.

Working Mothers. The share of mothers who work outside the home has increased greatly in recent decades, yet the education-related effects on a child of having a working mother are unclear. In 1975, 45 percent of mothers with children under 18 were in the labor force, but by 1987, 64 percent were.[17] Among married women (with spouse present) whose youngest child is under age 6, the rate of labor force participation increased from 18.6 percent in 1960 to 57.1 percent in 1988.[18]

The research findings are inconsistent on whether maternal employment helps or hinders cognitive development and social maturation of children in schools.[19] However, the increase in working mothers clearly has expanded the need for child care before and after school hours. Many school systems have responded to the demand by incorporating before and after school childcare programs, often right on school grounds. But most communities suffer

Box 2. Growth of Preschool Education

The number and percentage of children in preschool programs has risen dramatically in the last three decades. In 1965, only 10.6 percent of 3- and 4-year-olds were enrolled in school; by 1986 that figure had risen to 38.9 percent. While approximately the same share of whites and blacks were enrolled in preschool in 1986 (39.1 and 38.2 percent, respectively), only 28.7 percent of Hispanic children this age were in school.[1]

Concern about the importance of early childhood education stems partly from the social need to provide care for children of working mothers, but even more from the realization that the children who have had preschool programs perform better in elementary school. Beliefs that early interventions could avert early educational problems for many disadvantaged children led to strong federal interest in programs like Head Start.

Ironically, although many believe that preschool programs are most effective for the disadvantaged population, preschool enrollment rates have been consistently higher among more affluent families, as the accompanying table shows. Only about one-third of the disadvantaged children eligible for Head Start are enrolled.

At this time, most preschool programs are privately run. However, because of recent school reform efforts, more states are providing public preschool programs for disadvantaged children, particularly 4-year-olds.

As we enter the 1990s, there is considerable debate about the most appropriate types of programs for preschool children. The developmental approach is based on the natural learning behaviors of young children. Teaching methods stress learning social skills, self-confidence, and positive educational attitudes through play. By contrast, the cognitive approach adapts teaching methods developed for older children for the preschool level: young children are taught through lessons at desks, testing, homework, and strict discipline. Current thinking favors the developmental approach, although a wide variety of programs are available in different settings for young children.

Reference

1. U.S. Bureau of the Census, "School Enrollment—Social and Economic Characteristics of the Students: October 1986," *Current Population Reports*, Series P-20, No. 429 (Washington, D.C.: August 1988).

Percent of 3- and 4-Year-Olds Enrolled in Preschool, by Family Income and Race, 1986

	Race			
	White		Black	
Family income	Age 3	Age 4	Age 3	Age 4
Less than $10,000	14.6	34.7	24.8	40.0
$10,000–$19,999	17.4	37.9	35.8	47.6
$20,000 or more	37.9	57.8	51.5	47.8

Source: Pendleton, Audrey, "Preschool Enrollment: Trends and Implications," *Condition of Education: 1986* (Washington, D.C.: National Center for Education Statistics, 1986) p. 127.

from a lack of affordable, high-quality child care. The need is most acute for preschool-age children. In the fall of 1987, only 10.5 percent of public elementary schools offered any prekindergarten programs.[20]

A growing number of children simply go home to an empty house—the "latchkey" children—or are cared for by an older sibling. In 1984, an estimated 2 million children between the ages of 5 and 14 cared for themselves after school.[21]

Teachers

The quality of instruction in the nation's schools in recent years may affect the ability of the U.S. labor force to compete in international markets. In many respects, the teaching profession today is better off than it ever has been. However, a great deal of public concern has centered on the teachers: the aging of the teaching pool, the supply of minority teachers, salaries, evaluating teachers, and improving the status of the profession. Above all, there may be a shortage of qualified teachers over the next two decades.

Since the 1950s, the number of teachers in the U.S. has increased nearly every year; the trend has been the same in public and private schools, and at both the elementary and secondary levels. Between 1955 and 1970, when the large baby boom cohort was of school age, the number of teachers grew from 1.3 million to 2.3 million, and peaked at 2.5 million in 1977. Even after student enrollments began to decline, the number of teachers grew modestly, hovering around 2.5 million between 1976 and 1984, and 2.6 million between 1985 and 1988.

Public school teaching has long been dominated by women. In 1986, 69 percent of public school teachers were women, nearly the same proportion as in 1966. However, in part because fewer teachers entered the profession from the late 1970s to the early 1980s, when student enrollments were declining, teachers in 1986 are older and have more years of experience than did teachers two decades ago. The average age for teachers in 1986 was 41 compared to 36 in 1966. And, while teachers in 1966 had just 8 years teaching experience, on average, teachers in 1986 had 15 years experience.

Table 4. Average Annual Salaries of Teachers in U.S. Public Elementary and Secondary Schools, 1959–1988

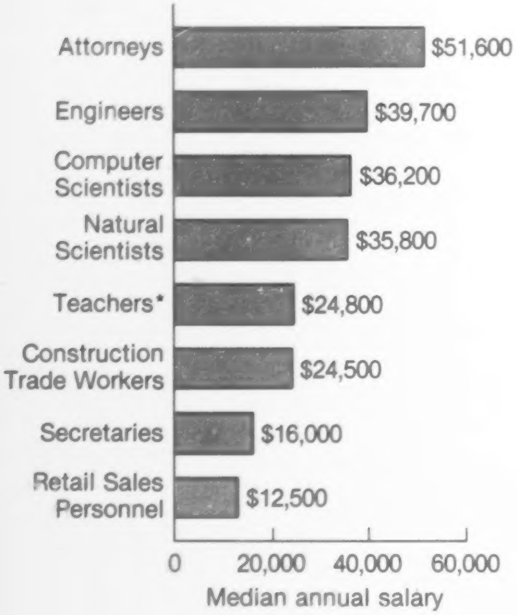
Year	Current dollars	Constant 1987–88 dollars
1959–60	$ 4,995	$19,693
1969–70	8,635	26,453
1974–75	11,690	26,037
1979–80	15,970	23,830
1980–81	17,644	23,595
1981–82	19,274	23,725
1982–83	20,693	24,425
1983–84	21,917	24,949
1984–85	23,595	25,840
1985–86	25,201	26,825
1986–87	26,551	27,656
1987–88	28,044	28,044

Source: National Education Association estimates cited in National Center for Education Statistics, *Digest of Education Statistics, 1989.*

The educational levels of teachers have increased markedly over the past two decades. In 1966, less than one-quarter of the teachers had a master's degree, while by 1986, just over one-half held an advanced degree.

Accounting for inflation, average teacher salaries fell 14 percent between 1972–73 and 1980–81. Since 1982, salaries improved, reaching an average of $28,044 annually in 1987–88 (see Table 4). Compared to other occupations, however, teachers still are relatively poorly paid. They earn more than secretaries, but less than computer scientists (see Figure 3).

Figure 3. Median Annual Salaries for Selected Occupations, 1987



*Elementary and secondary school teachers

Source: U.S. Bureau of Labor Statistics and U.S. Bureau of the Census.

Racial and Ethnic Makeup

The dominance of whites in the teaching field actually increased from 88 percent in 1971 to 90 percent in 1986, counter to the trend in the racial makeup of the students. The share of black teachers dropped from 8.1 to 6.9 percent over the same time period. About 3.4 percent of the public school teachers in 1986 were of other races, primarily Asian. Census Bureau estimates show that the share of Hispanics (of all races) grew from about 3.6 to 5.1 percent of teachers between 1980 and 1987.[22]

In individual districts, the minority share of teachers often is lower than that of the students. In Detroit, for example, in 1988, 88 percent of the public school children were black, while only 60 percent of the teachers were black.

The low participation of minorities in teaching has several explanations. Minorities are less likely to attend and complete college, and a college degree is a prerequisite for entering the teaching field. In the past, racial barriers probably prevented many of those who did complete college from teaching in white-dominated school districts. More recently, career opportunities for college-educated minorities have opened in other fields, often with higher salaries and greater advancement potential than teaching. The number of minority college graduates entering teaching has declined sharply.[23]

The issues regarding the impact of minority teachers in the classroom are complex. Some advocates believe minority students should have minority teachers, but clearly not all can unless the number of minority students in teaching rises dramatically. Many agree that in the multi-cultural society of the U.S., it is beneficial for *all* students—regardless of race or ethnic heritage—to be exposed during their early educational careers to teachers and role models from a variety of racial, ethnic, and cultural backgrounds.

There is no conclusive evidence that minority teachers can teach minority students any more successfully than nonminority teachers, although there is evidence that teachers of high socioeconomic status (regardless of race) have greater difficulty teaching poor or disadvantaged minority students.[24] There is evidence that teachers with high verbal ability, regardless of their race, have a positive influence on low-income minority students.[25]

Will There be a Teacher Shortage?

Widespread concern about an impending teacher shortage stems from five broad trends. First, the teaching work force is aging, and more teachers will be nearing retirement age around the turn of the century. Census Bureau data show that the percentage of teachers in the 40 to 49 age group jumped from 22 to 32 percent between 1980 and 1987, while the percentage in ages 22 to 29 dwindled, from 24 to only 15 percent. Second, a large share of teachers appear to be contemplating leaving their profession.[26] Third, reports of current teacher shortages in specific fields—particularly in math, the sciences, and technology—raise the specter of severe shortages in critical curriculum areas. Fourth, fewer college students overall are entering teaching; from a peak of 194,229 bachelor's degrees in education awarded in 1972–73, only 87,221 were awarded in 1985–86, a decline of more than 55 percent. However, that number seems to have increased in the late-1980s.[27] Finally, while all of these factors suggest declining numbers of teachers in the future, the number of students, as shown earlier, is certain to increase.

Although the National Center for Education Statistics projects that the supply of new teacher graduates will not satisfy future demand, national surveys in the late 1980s reported relatively few unfilled vacancies.[28] The supply of new teachers is not limited to the number of college students majoring in education. New teachers may come from students majoring in other fields, people who have previously left the field, and people changing professions. The future supply of teachers will also depend on policy-related factors that control access to the field and encourage teachers not to seek other professions. And, since two-thirds of elementary and secondary teachers are women, expansion of opportunities for women in other professions may entice many would-be teachers into more lucrative careers.

Ellen Galinsky

The supply of minority teachers falls far below the number of minority students.

Increasing Costs of Education

Many of the demographic trends that have shifted the number and composition of students within states and individual school districts have also placed severe strains on the management of the school systems. Because schools are governed and financed at the state and local level, changes in an area's population can spell trouble for a district's education budget. These demographic changes, along with the push for education reforms, financial constraints, and other factors, are changing the old patterns of governance, possibly weakening the American tradition of local control over public schools.

Nationally, estimated expenditures for elementary and secondary education were approximately $199 billion in 1988–89, up from $165 billion (in constant 1988–89 dollars) ten years earlier, an increase of 21 percent. Per pupil expenditures were estimated to be $4,645 in 1987–88. Over the past decade, expenditures in constant dollars have increased about 25 percent, but all the increase began in 1983, during the period of emphasis on school reform and improvement (see Table 5).

Table 5. Total Education Expenditure per Pupil, 1978–1988

	Total expenditure per pupil[1]	
School year ending	Current dollars	Constant 1986–87[2] dollars
1978	$2,002	$3,555
1979	2,210	3,589
1980	2,491	3,569
1981	2,762	3,547
1982	2,997	3,542
1983	3,230	3,661
1984	3,500	3,825
1985	3,760	3,954
1986	4,070	4,160
1987	4,365	4,365
1988	4,645	4,460

[1] Total expenditure per pupil in average daily attendance in public elementary and secondary schools. Total expenditure includes all current expenditures, capital outlay, and interest on school debt.

[2] Based on the Consumer Price Index, adjusted to a school-year basis.

Note: Figures for 1981–1988 are estimates.

Source: National Center for Education Statistics, *The Condition of Education, 1989 Edition*, Vol. 1 (Washington, D.C.: 1989).

Expenditures for elementary and secondary education represent a small proportion of spending by the federal government, but the largest single item for state and local governments. In 1986, education at all levels accounted for 29 percent of total state and local spending; elementary/secondary education accounted for 20 percent. The second highest budget item, public welfare, consumed only 10 percent of state and local spending in 1986.[29]

Like many other aspects of education, per pupil expenditures vary greatly among the states and among school districts, even within the same state or same metropolitan area. Excluding Alaska, where the high cost of living and a sparse population drive up costs, expenditure per pupil in 1986–87 ranged from $6,497 in New York to $2,350 in Mississippi.[30]

The majority of school district budgets are spent on salaries and benefits, primarily for teachers. Increases in per pupil expenditures in the past two decades have been driven largely by decreases in the pupil-teacher ratio—from 24.0 in 1967 to 17.4 in 1988.[31]

In order to attract and keep skilled teachers, personnel costs could rise more rapidly in the near future. Also, the aging of the teachers means that more will be entering retirement after 2000, drawing down pension funds.

Programs for students with special needs, especially handicapped students, have contributed to higher costs. The 1975 Education for All Handicapped Children Act required the provision of free and appropriate educational services to all handicapped persons ages 5 to 21. This act increased expenditures in two ways.

First, it brought into the schools students who had not been served before.[32] The number of students served by federally-supported education programs for the handicapped increased from 3.7 to 4.4 million between 1977 and 1988 (or from 8 to 11 percent of all students), due primarily to the growth in the number of students who were classified as learning disabled.[33]

Second, the cost of such special services are much higher than for regular education programs. In 1985–86, the average expenditure in public and private schools to educate a handicapped child was $6,335 compared to $2,780 for other students.[34]

Current demographic trends, especially changes in the composition of homeowners could weaken taxpayer support for schools in many communities. In many states, school districts depend upon local sources for one-third to one-half of their operating funds. In areas with declining enrollments, homeowners are often critical of the ever-increasing educational costs. In urban areas, homeowners are more likely to be childless, non-minority, older, and wealthier than the students' families. In the Sunbelt states, the rapid increase of older white residents, due to migration from the northeastern and north central states, is running counter to the increase in the Hispanic and black school-age population.

The aging of the national population means not only that a smaller proportion of the residents has a direct stake in the public schools, but also that the competition for funds from other sectors, such as health, may become more severe. The elderly, who traditionally have high rates of home ownership and of voting—may feel little commitment to the young families and children who consume such a large share of tax revenues.

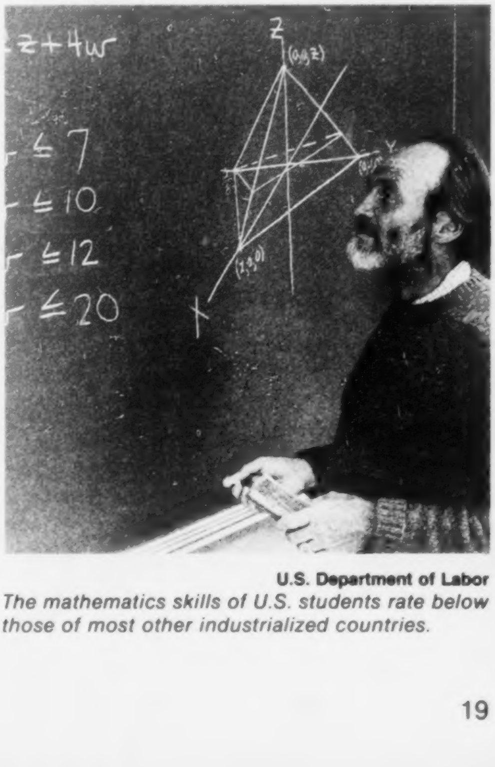
In rural areas that have experienced the consolidation of their local school systems into a larger regional unified school districts, a similar loss of taxpayer interest may occur. Because rural populations have become more elderly and poorer over the past decade, they are less able to absorb tax increases.

The public's skepticism about the schools is further fed by reports that student achievement is waning. To some extent this is a result of an increase in the expected level of achievement to meet more rigorous requirements of future jobs. However, there is a real concern that the growing share of minority and poor students who tend to have higher dropout rates and lower academic skills have depressed the overall academic levels in many areas.

Grading Student Performance

Achievement test scores have received a great deal of national attention, although many belittle their validity in measuring academic skills or potential for disadvantaged students. Whatever their drawbacks, test scores remain a convenient report card for schools and students. Scores in the major subject areas have improved only slightly over the past decade, but the differences between blacks, whites, Hispanics, and other students have narrowed. However, large gaps between racial and ethnic groups remain; and the general level of knowledge and skills of American students, as recorded in these assessments, are disturbingly low given the labor force needs of the future.

In recent years, the National Assessment of Educational Progress (NAEP) has provided insight into different dimensions of literacy and into the different skill levels attained by different age, race, and sex groups. The NAEP has found that the reading skills of the



U.S. Department of Labor

The mathematics skills of U.S. students rate below those of most other industrialized countries.

urban disadvantaged population have improved since 1971. But, while there has been real improvement at the low end of the continuum, reading skills among the more advantaged urban students have not advanced.[35]

The plateau in the skills of the middle- and upper-class students, and among the higher performers in the disadvantaged population lead one expert to assert that: "The goal of 12th-grade literacy for all adults must remain only a tantalizingly remote possibility. Some further progress can be made toward improving the skills of students at the lower levels of the distribution. At the upper levels, however, reading skills will be difficult to increase."[36]

In mathematics, student proficiency improved slightly between the early 1970s and late 1980s. Test results indicate, however, that the math capabilities of many students are not adequate for needs in adulthood. One-quarter of 13-year-olds appeared not to possess the skills in whole-number addition, subtraction, multiplication, and division needed for everyday tasks. Nearly half of the 17-year-old students did not possess skills in the most basic algebra and geometry or in using decimals, fractions, and percents; and only 6 percent could solve multi-step problems and use basic algebra.[37] These findings raise concerns about the mathematics skills of the upcoming work force—both for functioning effectively as adults and for contributing to the national economy.

Indeed, international studies confirm such concerns. In a 1988 study of math and science achievement of 13-year-old students in six countries, the United States performed below (or at the lowest level of) all other countries at all levels of mathematical ability. That is, a smaller share of U.S. children were able to add and subtract, to solve simple problems, to solve two-step problems, to understand concepts, or to interpret data than children in Korea, Spain, the United Kingdom, Ireland, and a number of the Canadian provinces.[38]

Science test scores in the U.S. declined sharply in the 1970s (much more so for older than for younger students), but recovered somewhat in the 1980s. By 1986, 9-year-olds had regained the levels of proficiency shown in 1970, but despite recent gains, 17-year-old students were still well below their 1970 levels. A majority of these older students were unable to analyze scientific procedures and data. While about 40 percent of these students demonstrated some moderate understanding of science, only 7 percent showed any level of sophistication.[39]

Internationally, the U.S. is not at the bottom of the countries tested in science abilities: of seven countries tested, Ireland and two out of six Canadian provinces scored lower. Nevertheless, the U.S. scored well below those at the top, Korea and British Columbia (Canada).[40]

Racial and Ethnic Differences

Test scores vary widely among racial and ethnic groups. Among 17-year-olds, for example, 89 percent of whites performed at an "intermediate" level or above on a reading proficiency assessment in 1988, compared to 76 percent of blacks and 73 percent of Hispanics. About 46 percent of whites performed at the "adept" level, compared to only 26 percent of blacks and 24 percent of Hispanics. Similar racial/ethnic differences were found among 9- and 13-year-old students. These differences have diminished in recent years. In 1975, 86 percent of whites, 42 percent of blacks, and 52 percent of Hispanics scored in the "intermediate" level; however the gaps remain quite large.[41]

Similar differences are found in math and science scores. Among 17-year-olds, 58 percent of white students could complete moderately-complex mathematical procedures and reasoning in a 1985–86 national assessment by NAEP, compared to only 22 percent of blacks and 27 percent of Hispanics. The

Box 3. Literacy Among Young Adults

Relatively few Americans are utterly illiterate: thus, it makes little sense to address public concern at the level of illiteracy alone. Rather, recent studies have focused on the distribution of the population across a range of performance on a variety of skills. They measure functional performance in a society that demands literate functioning on several dimensions.

In 1985, the National Assessment of Educational Progress assessed the literacy skills of young adults, aged 21 to 25.[1] The study measured proficiency on a number of tasks that simulate those encountered in various adult settings; the study identified three dimensions of functional literacy:

- *Prose*—reading and interpreting prose (as in newspaper articles, magazines, and books),
- *Document*—identifying and using information located in documents (such as in forms, tables, charts, and indexes), and
- *Quantitative*—applying numerical operations to information contained in printed material (such as a menu, a checkbook, or an advertisement).

For each dimension, respondents were ranked on a scale indicating ability to perform a range of tasks from simple to complex. Young adults performed quite well on tasks at the lower end of all three of the scales. But as tasks increased in complexity, fewer adults could perform them. Only a relatively small percentage could perform at levels considered to be more complex and challenging. Perhaps more disturbing, however, were the differences in literacy skills among different populations. Literacy skills were clearly related to background characteristics such as parental education and occupation, and access to books and magazines at home during childhood. Similarly, amount of education and current reading and other literacy practices affected skills. But even after these differences were accounted for, the two major factors affecting literacy performance were the respondent's race/ethnicity and level of education. On average, black young adults performed significantly below their white peers, and Hispanics performed at a level intermediate to whites and blacks. When demographic, education, and literacy practice variables were held constant, the differences between black and white young adults were reduced by about one-fourth, while differences between black and Hispanic youths increased. Some social scientists argue that some less-tangible aspect of socioeconomic status may explain the persistent differences in literacy levels among racial and ethnic groups.

Reference

1. Kirsch, Irwin S. and Ann Jungeblut, *Literacy: Profiles of America's Young Adults*, National Assessment of Education Progress (Princeton, New Jersey: Educational Testing Service, 1987).

1985–86 science assessment yielded similar results. The lower achievement in science among blacks and Hispanics has been persistent over time, and appears in all age groups.

Discrepancies recorded in elementary and secondary school persist into adulthood. Tests of young adult literacy show that white non-Hispanics have the highest average skill levels, followed by Asians and Native Americans, then Hispanics, and then blacks. And, "while the score advantages of white young adults are due, in part, to their greater schooling attainment, large differences remain between white and black young adults even when controlling for years of schooling completed."[42]

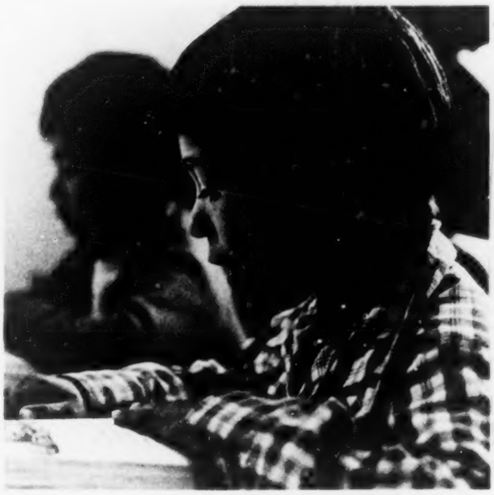
There is about a four-year difference in literacy abilities between blacks and whites with the same number of years of schooling. On average, blacks who have completed four years of college perform at about the same level as white high school graduates. When researchers in a recent study controlled for students' background, demographics, education, and literacy practices, "only about one-third of the race/ethnicity difference disappear; the remaining differences are still quite large."[43] These trends suggest serious shortcomings in the education of minorities in the United States, and do not bode well for the employment opportunities of these disadvantaged populations.

Asian students, on average, tend to score well on standardized tests. For every year between 1975 and 1987, Asian Americans scored higher than whites and other major ethnic groups on the mathematics section of the Scholastic Aptitude Tests (SAT) taken by college-bound students. In 1988, a greater share of Asian eighth graders scored in the top one-quarter on achievement tests in history, mathematics, reading, and science than did blacks, Hispanics, and American Indians. They also scored higher than white non-Hispanics in math.[44]

With the proportion of minorities in American schools increasing, any attempt to raise the overall skill levels of American students will have to begin by addressing the problems of minority achievement.

Dropping Out of School

Along with lagging achievement test scores, the large number of youths who fail to finish high school has concerned the American public and policymakers. High school dropouts are more closely associated with higher crime, drug use, and unemployment rates than those who go on to finish school. In short, they are more likely to become a drain rather than a contributor to society. Furthermore, the number of jobs available to high school dropouts is likely to decline from about 18 to 13 percent during the last decade of the century.



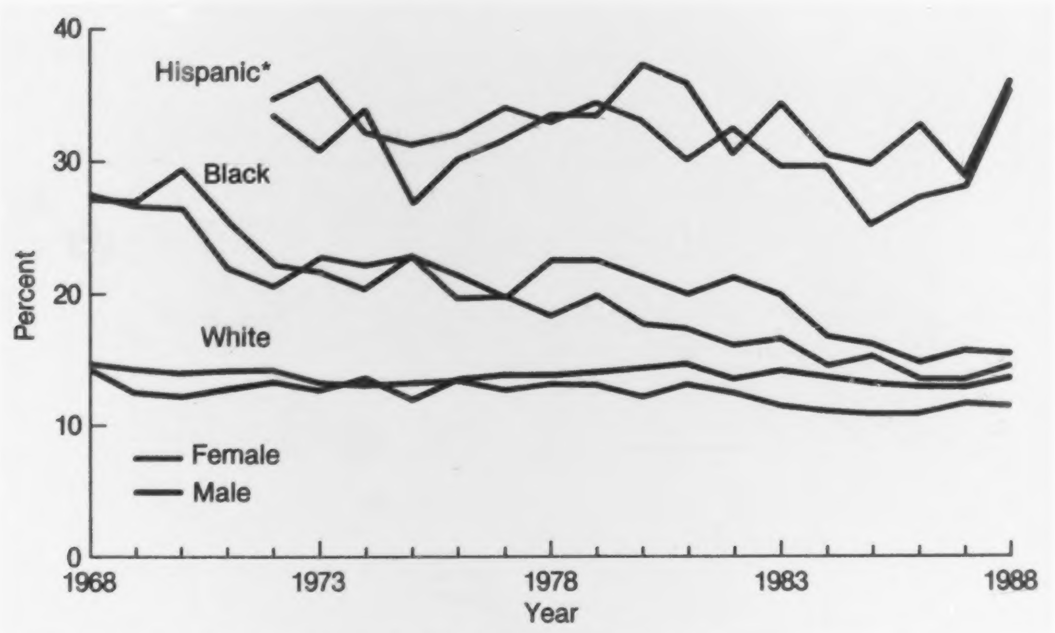
ACTION/VISTA

The gap has narrowed, but the reading skills of minorities lag behind those of other students.

Dropout rates for U.S. students have fallen over the past 20 years, particularly for blacks (see Figure 4). The percentage of black youth ages 16 to 24 who are not in school and have not yet completed high school declined from 27 percent in 1968 to 15 percent in 1988, a notable achievement. For whites, the dropout rate fell from 15 percent in 1968 to 13 percent in 1988. The rates for Hispanics, however, have remained high throughout the period. In 1988, 36 percent of Hispanics between ages 16 and 24 had not finished high school.[45]

Even as dropout rates improve overall—especially among blacks—rates have remained high for blacks and Hispanics from low-income and single-

Figure 4. Status Dropout Rate by Race/Ethnicity and Sex: 1968–1988



*Hispanics may be of any race; separate data not available before 1972.

Note: The *Status Dropout Rate* is the proportion of youth, ages 16 to 24, who have not completed high school and are not currently enrolled.

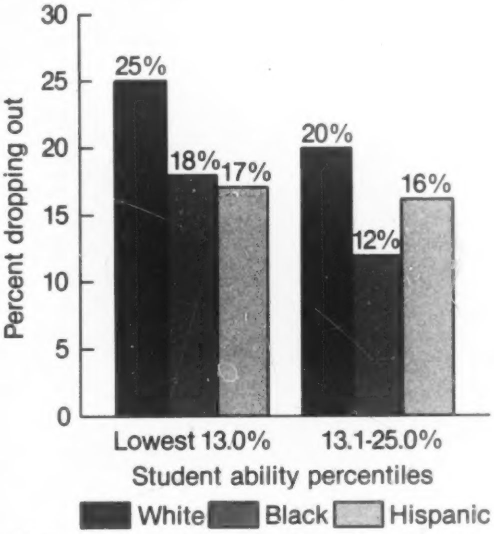
Source: Frase, Mary, "Dropout Rates in the United States: 1988," *National Center for Education Statistics: Analysis Report* (Washington, D.C.: U.S. Department of Education, September 1989).

parent families. Some evidence shows that the dropout problem may be getting much worse in the poorest neighborhoods.[46] Although the data are not strictly comparable, estimated dropout rates in some urban areas exceed the national averages by three or four times.[47] Deepening concentrations of poverty in urban neighborhoods may be associated with dramatic increases in dropout rates in inner city schools.[48]

The higher dropout rates among blacks and Hispanics are largely explained by underlying differences in socioeconomic or family background characteristics, ability test scores, or location of residence. "[L]arge dropout-rate differences among whites, blacks, and Hispanics (although not between the sexes) diminish, vanish, or are even reversed when personal and family background factors are taken into account."[49]

In fact, among students with low test scores, minority students are less likely than whites to drop out (see Figure 5). Overall, 19 percent of the students whose scores were in the bottom quartile (three-fourths of the students had higher scores) dropped out of high school; 22 percent of all whites, 17 percent of all Hispanics, and 16 percent of

Figure 5. Percent of Low-Performing Students Who Dropped Out of School by Race/Ethnic Group, 1980–1982



Source: National Center for Education Statistics, High School and Beyond Survey.

all blacks in the bottom quartile dropped out. Similarly, blacks and whites living in the suburbs do not differ from one another in their dropout rates, nor do those living in central cities.

Many dropouts later return to finish school or get a high school equivalency degree. Among the 1980 sophomore class, who would have graduated in 1982, nearly half (46 percent) of the students who dropped out before finishing their senior year earned a diploma or an equivalency certificate within four years of their expected graduation date. About one-third of those earned a high school diploma and the other two-thirds earned some type of equivalency credential. Generally, dropouts who finished within one year of their expected graduation date were the most likely to earn high school diplomas (45 percent) while those who delayed longer were more likely to obtain an equivalency credential. In general, those who returned to finish school after dropping out resembled those who did not drop out—that is, they were more likely to be white, have a higher socioeconomic status, earn better grades, and have higher test scores than other dropouts.

In 1988, 701,000 people took the General Education Development (GED) examination, and 72 percent passed it.[50] While there has been criticism that GED-takers can pass the test with 6th-grade reading skills and that few GED students who go on to college graduate,[51] there are few differences in employment and earnings patterns between dropouts who later earn a high school diploma and those who complete a GED.[52]

Are Some Schools Better?

Educators have been challenged to find ways to improve student performance and prevent students from dropping out of school. However, they must begin by identifying factors that can explain the differences in student achievement, particularly factors that might be enhanced through education reforms or shifts in policies.

The Equality of Educational Opportunity Report (better known as the Coleman Report) in 1966 found that the schools children attended were poor predictors of which students were likely to be high achievers. What did matter were students' background and socioeconomic status.[53]

For many years this finding was misinterpreted to mean that schooling overall has little effect on how much students learn. Subsequent research clearly confirms that family background variables are powerful predictors of school success. Students from families where the parents are well-educated, education is valued, and intellectual pursuit encouraged are more likely to do well in school. But schooling, too, makes a difference.

Staying in school and the length of time students spend studying can have a powerful impact on learning. Studies conducted during summer months and teacher strikes have shown that inner city and minority youth are especially prone to sharp drops in learning skills and knowledge when not in school.[54]

Differences among schools explain from one-quarter to one-third of the total differences in student achievement, according to recent studies. The quality of schools may have an even greater impact on the rate at which students gain knowledge or skills; up to 45 or 50 percent of the variability in student learning has been attributed to differences in schools.[55]

Even though policymakers and researchers agree that schools can make a difference, there is little agreement about which school characteristics matter most. Expenditure levels have proved a weak indicator of educational quality. No consistent relationship has been found between student performance and four major determinants of expenditures—teacher-pupil ratios, teacher salaries, teacher experience, and teacher education.[56] Nonetheless, most local communities have supported increases in education expenditures to improve their schools. American taxpayer's support for public schooling has more than doubled since 1930, using an index calculated by the Department of Education.[57]

Gallery of Images

School quality and student achievement often reflect the wealth of parents and community.

One of the problems with estimating the impact of expenditures and other resources on student outcomes is the strong positive relationship between students' socioeconomic characteristics within school and the school's resource levels, including expenditures. Affluent parents try to ensure that their child gets a good education by considering the reputation of local schools when choosing a place to live. Even if less affluent parents gave as much consideration to the quality of schools when choosing their residence (and the research indicates they do not[58]), they could not afford to move to the neighborhoods with the best schools.

Aside from neighborhood, are there specific factors of a school environment that foster high achievement? Many cite class size, school size, and a less tangible variable, "school climate," as important factors, yet there is no consistent evidence of a relationship between these variables and student achievement.

Between 1961 and 1986, the median number of pupils per class declined from 30 to 24 for elementary schools and from 27 to 22 for secondary students with no related increase in student achievement.[59] Research suggests that little improvement in student performance can be expected until class sizes are reduced to as few as 15 pupils per class on average. For most districts this would be prohibitively costly.

A related approach is intensive tutoring outside of class for youth with special needs in targeted curriculum areas. The experience of Japan lends some support for this idea. The average 8th grade math class in the United States has 26 pupils, compared to 41 students in Japan, yet Japanese students score higher than American students on science and math achievement tests. The Japanese advantage may be explained, in part, by use of special tutors and intensive study courses that supplement the regular school instruction of Japanese students.

The size of a school's total enrollment also has been blamed for academic decline, particularly in large urban high schools.[60] However, because most urban high schools are larger than rural schools, it is difficult to isolate the effects of the urban environment from size of the enrollment. A recent study in California found that large schools in *affluent neighborhoods* produced high-performing students.

Many teachers advocate "personal environments" for disadvantaged students in the belief that marginal students fare better in small schools. For school administrators, however, the issue is less clear. Economic forces, including tax laws, favor the construction of large schools, particularly when the school board wants a full-size gymnasium and a respectable school library. The most powerful attraction of a large high school is its greater staff specialization, and, consequently, greater diversity of course offerings.

Yet large schools also are more likely to have a greater incidence of staff problems as perceived by principals (for example, absenteeism and lack of interest), more student discipline problems, and more tracking.[61] In urban high schools, nearly one-half of the potential learning time can be lost due to absence, lateness, and inattention.[62]

Differences Within Schools

Within the same school, differences in teachers' expectations can affect the manner in which particular children receive encouragement and recognition, the total amount of instruction actually delivered to different groups of children, the ability group or curriculum track to which a child is assigned, and, not least of all, the aspirations of the child. As early as the first grade, teachers' expectations can have a greater impact on learning than the children's background and family variables.[63]

Junior high and high school track assignments have a powerful effect on student aspirations and the likelihood of entering college.[64] However, in general, academic tracking at the secondary level has only a modest effect on the amount students learn. Because minorities are disproportionately represented in vocational and lower-level track courses, many experts have suspected that tracking perpetuates lower academic achievement among blacks and Hispanics. However, tracking assignments and the types of courses chosen by minority students may contribute to, but cannot fully explain, racial or ethnic differences in school achievement.[65]

The lower achievement among minority students often is manifested early in their school careers and probably results from a variety of factors beginning long before kindergarten. A recent National Science Foundation-funded study of elementary students in Montgomery County, Maryland, found that "nearly half of the county's black and Hispanic students are straggling so badly by the end of elementary school that they cannot keep up with the county's regular math curriculum."[66]

In sum, since the Coleman report in 1966, researchers have learned a great deal about the fragility of school environments, but very little about school characteristics that work invariably across a wide range of conditions.

Finance Reform

Recognition of the link between school location and neighborhood and the quality of education students receive underlies the national movements to reform the way schools are financed.

Box 4. School Governance

In the United States, state governments are responsible for providing education, although they delegate the responsibility for operating schools to local school districts. States regulate a myriad of district activities, from the number of school days per year to grade-level curriculum and graduation requirements, but the extent of regulation varies greatly among the states. In recent years, there has been a trend toward greater state control. At the same time, there has been some movement toward greater decentralization within school districts, granting principals and teachers more power to make decisions about the use of resources and curriculum in their own schools and classrooms.

Each independent school district often has the power to levy taxes and is governed by an elected school board. As of 1987, all but 18 percent were fiscally independent.[1] Nationally, 44 percent of the revenues for public elementary and secondary education were supplied by local sources in 1986–87, while 50 percent came from the states.

The public has a greater and more direct role in the governance of education than in other local government functions. In addition to electing school board members, citizens vote on school tax and bond issues in many areas. Approximately 85 percent of local school boards are elected and the elections tend to be nonpartisan.[2]

Local school districts operate within a federal system, although the federal government supplied only 6 percent of the costs in 1986–87. The limited federal role in elementary and secondary education tends to focus on three areas: (1) research and statistics for policymakers at all levels; (2) funding programs for students with special needs such as the disadvantaged, those with limited English proficiency, and the handicapped; and (3) initiating special programs in areas of national interest at a given moment, such as reducing school dropout rates.

Consolidation of School Districts

The majority of school districts are small, serving less than 3,000 students. The largest school districts, those serving 25,000 students or more, represent only 1 percent of all districts, but serve more than one-quarter of all students.[3] Minority students tend to be concentrated in the largest school districts and to comprise a large percentage of the district enrollments. In 1984, the 20 largest school districts enrolled one of every four minority students, compared to 1 of every 20 white students.

In this century, the school consolidation movement has greatly reduced the number of school districts. In 1931, there were about 127,500 school districts; in 1945, approximately 100,000. By 1987, there were only about 15,600 local school districts.[4]

The consolidation of school districts is often controversial because it can dilute the power of a local community over the schools. In rural areas consolidation may unite, in a single school district, communities that are geographically far apart, resulting in long bus rides for many of the students.

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1. Verstegen, Deborah, *School Finance at a Glance* (Denver, Colorado: Education Commission of the States, March 1988) pp. 75–81.
2. Wirt, Frederick and Michael Kirst, *Schools in Conflict* (Berkeley, California: McCutchan Publishing Company, 1982) p. 94.
3. Ibid.
4. National Center for Education Statistics, *Digest of Education Statistics, 1989* (Washington, D.C.: 1989) p. 90.

Prior to the 1930s, nearly all the funds for public schools came from local sources (see Table 6), with the bulk coming from the local property tax. Consequently, districts with strong property-tax bases could afford better school facilities, more teachers, and higher salaries than districts with weak property-tax bases. (See Box 4).

In the 1930s, new funding formulas were developed which linked the amount of state aid going to each local school district to the district's own ability to finance schools. Under such "equalization" formulas, school districts with weak local tax bases received more state aid per pupil than districts with stronger tax bases. These equalization programs lessened the reliance on locally-raised revenues and increased the role of the states. The state share of education revenues grew from 17 percent in 1930 to 30 percent in 1940, and 39 percent in 1960.

Many of the inequities that had disturbed the earlier reformers persisted into the late 1960s, when another period of reform began. Not only did per pupil expenditures differ widely within states (there were ratios of 4-to-1 or even higher between the lowest and highest spending districts in a state), but minority and poor students often were concentrated in the poorer, low-spending districts. The richest districts, with the highest per pupil expenditures, tended to be in the suburbs.

Reformers pursued a variety of approaches to change state school finance systems: court suits, legislative strategies, and referenda. The court challenges mounted in many states in the 1970s and 1980s produced mixed results. No court ruled against the use of local property taxes to fund public schools. However, several courts ruled as unacceptable school finance systems that produced significant variations in per pupil expenditures, charging that such discrepancies denied equal educational opportunities to children according to where they lived. The changes in population distribution over the past few decades—movement from central cities to the suburbs and from the Rustbelt to the Sunbelt—have only exacerbated the gaps between relatively wealthy and poor districts.

Table 6. Revenue Sources for U.S. Public Elementary and Secondary Schools, 1920–1987

School year ending	Sources		
	Local[1]	State	Federal
		Percent of total	
1920	83.2	16.5	0.3
1930	82.7	16.9	0.4
1940	68.0	30.0	1.8
1950	57.3	39.8	2.9
1960	56.5	39.1	4.4
1970	52.1	39.9	8.0
1975	48.8	42.2	9.0
1976	46.5	44.6	8.9
1977	47.8	43.4	8.8
1978	47.6	43.0	9.4
1979	44.6	45.6	9.8
1980	43.4	46.8	9.8
1981	43.4	47.4	9.2
1982	45.0	47.6	7.4
1983	45.0	47.9	7.1
1984	45.4	47.8	6.8
1985	44.4	48.9	6.6
1986	43.9	49.4	6.7
1987	43.9	49.8	6.4

[1] Includes intermediate sources.

Source: National Center for Education Statistics, *Digest of Education Statistics, 1989.*

From the 1970s to early 1980s, new school finance formulas to reduce expenditure inequalities were adopted in a number of states. These reform efforts and new formulas increased the state share of education funding. In 1978–79, for the first time, the state share of school funding exceeded the local share. By the late 1980s, states were providing about half of all revenues for public elementary and secondary schools.

One concern voiced during court cases and legislative considerations was

Box 5. The Role of the Courts

The U.S. court system is a major actor in determining what happens in schools. It provides an opportunity to challenge local or state policies or decisions that people feel are unfair or illegal. Perhaps the most visible example has been the issue of racial segregation. The Supreme Court ruled segregation on the basis of race unconstitutional in *Brown v. Board of Education* in 1956. That case outlawed *de jure segregation* (the establishment of separate school systems or schools for blacks and whites by law or explicit school policy). This invalidated laws in many southern states under which black and white students attended separate schools.

However, segregation in the North and West was not de jure, but rather de facto. There were no laws or policies forbidding blacks from attending the same schools as whites, yet blacks and whites tended to go to different schools because they lived in different neighborhoods. Court suits charging *de facto segregation* were filed in many school systems around the country. These cases generally revolved around two questions—was the de facto segregation the result of the actions (or inactions) of public officials? If so, what remedies were necessary and appropriate to redress the situation?

As a result of court challenges, school districts were charged with desegregating their schools through a variety of methods. These included busing children from racially segregated neighborhoods to newly-integrated schools, consolidating city and suburban school districts, creating "magnet schools" (schools with special science laboratories, language classes, or other programs to attract non-minority students), designing new school attendance zones, and combining schools. Some school districts found themselves under the supervision of the courts for long periods of time as courts monitored their compliance with desegregation plans.

School finance was another area in which the courts were asked to redress a perceived wrong. School finance systems in a number of states were ruled unconstitutional under provisions of the state constitution. In other states, new school finance formulas were adopted in order to head off the possibility of a court suit.

Fear of a court suit can lead to inaction as well as action. Recent surveys found that fear of lawsuits (and to a lesser extent, the lack of affordable liability insurance) has caused school districts to restrict or eliminate certain kinds of activities—including physical education, extracurricular activities, vocational classes, science laboratories, sports, field trips, and the use of volunteers.

Reference

Rothman, Robert, "Fear of Lawsuits Spurs Districts to Cut Programs," *Education Week*, Vol. IX, No. 1 (September 6, 1989) pp. 1, 32.

whether increased levels of state funding would lead to greater state control over local school districts. The few studies to date on this issue have shown no consistent relationship between levels of state financing and state control.[67]

However, there is some evidence that the type of aid, rather than the level, may be related to the extent of local discretion. *General aid* has few, if any, restrictions on how local school districts may spend it. *Categorical aid* is for a specific program or purpose, and, as such, carries with it more restrictions on programs and policies. Categorical aid includes aid for special, compensatory, and bilingual education, programs for gifted and talented students, magnet schools, and small schools. Federal aid is primarily categorical aid, whereas state aid consists primarily of general aid.

Education Reform

In the early 1980s, a new wave of reform hit the schools, spurred by the publication in 1983 of *A Nation at Risk*, the report of the President's National Commission on Excellence in Education. That publication focused the nation's attention on shortcomings in the outcomes of American education—how poorly American children did in the three R's, how poorly they compared to children in other countries, and how few academic subjects students took in high school.

The Excellence Commission was followed by a host of other commissions at both the national and state levels, which picked up the theme of the urgent need for major reforms to improve the performance of American students. Much of the impetus for this reform movement came from business leaders, state governors, and other groups and individuals not normally involved in educational policymaking, reflecting the widespread concern about low academic achievement among young Americans.

Reform efforts have been directed toward several general areas, including improving teacher qualifications and performance, raising graduation and promotion requirements, and instituting plans for accountability for student performance by teachers and schools.

While many aspects of the educational reform movement have been concerned with improving the quality of the teaching work force, a secondary, and sometimes contradictory concern, has been how to recruit more people into the teaching profession to ease the projected teacher shortages. The first wave of reform affecting teachers focused on guaranteeing a minimum competence level through testing. There is no consensus on precisely what ought to be tested and where the lines should be drawn for admitting teachers into the profession, but the concept of testing now seems to be well established. By 1988, 46 states had enacted competency testing programs as part of the process of initially certifying teachers.

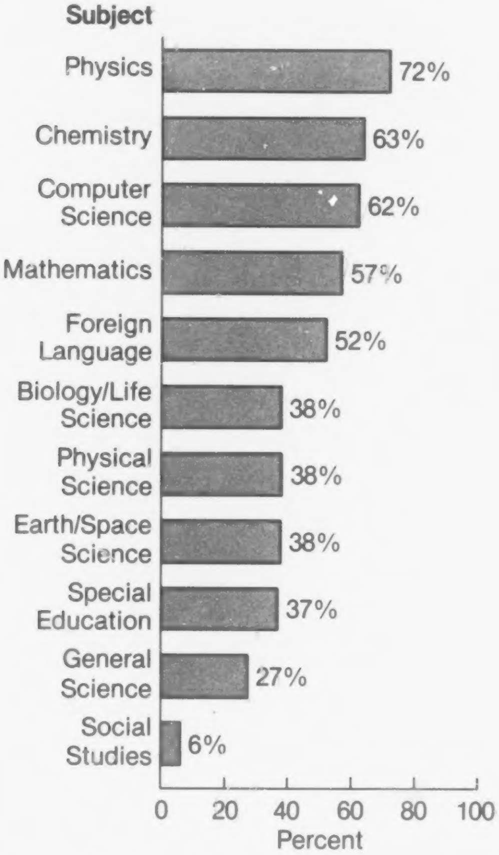
Despite the trend toward raising teacher quality, concern about possible shortages in certain teaching areas has led many states to adopt or continue alternative, emergency credentialing mechanisms to assure an adequate supply of teachers. Shortages of teachers in some fields are already being felt. In 1986, over one-half of high school principals reported difficulty in hiring qualified teachers for math, foreign languages, and specialized science courses (see Figure 6).

In the late 1980s, a second wave of reform emerged, focusing more directly on what students are taught and what they learn. In 1988 and 1989, several national groups proposed changing the way in which various subjects are taught to American students, charging that a major reason that U.S. students perform

Ann Luce

Recent education reforms have focused on the way students are taught and what they learn.

Figure 6. Percent of High School Principals Reporting Difficulty in Hiring Qualified Teachers by Subject Area, 1986



Source: National Science Foundation. National Survey of Science and Mathematics Education, 1985-86.

so poorly on standardized tests is the way they are being taught basic subjects such as history, math, and science. Some observers have expressed concerns about this development, fearing it may reduce the autonomy of individual school districts, schools, and teachers.[68]

During 1989, great momentum was building for the establishment of national performance standards for students, a notion which previously was unacceptable. The major outcome of the Education Summit held by President George Bush with the state governors in September 1989 was the proposal for the development of national goals in seven areas for all American students. These would not be federal standards for which the states would be held accountable by the federal government. Rather they would be developed in collaboration with the states and would be implemented and monitored by the individual states. Furthermore, the governors endorsed a reduction of federal and state regulations in return for a commitment to improve results.

Impact of Reform

At the close of the 1980s, however, the changes in the educational process, especially as they affect student performance, have been relatively minor and it is unclear whether they will have long-term consequences.

It may be too early to assess the impact of the reform movement. The nature of the changes that have taken place is not always clear. For example, students must now take more academic courses in order to graduate, but that does not necessarily mean that students are learning more in those subjects. Some schools have complied with more stringent requirements simply by renaming courses or spreading the same content over a greater number of courses. For students with low or average grades, increases in academic courses were primarily at the general, basic, or remedial level. They do not constitute the high-quality type of curriculum envisioned in *A Nation at Risk*. On the other hand, increased graduation requirements and competency testing have not contributed to higher dropout rates among at-risk students as some had feared.[69] Furthermore, the number of students taking Advanced Placement courses at the high school level has increased substantially, which suggests that more students are taking higher-level, rigorous courses.

One impact of reform is a movement towards greater uniformity within and between states. The states are taking a stronger role in setting standards, although not in the financing, of education. The state share of expenditures rose only about 2 percent between 1983 and 1987, in part to compensate for a decrease in the federal share. Where the state share has risen, much of it has gone to increasing the salaries of current teachers.

Some of the most active reform states have been in the South, historically, the region with lowest average education expenditures, student performance, and teacher salaries. However, many southern states have experienced sustained economic growth in the 1980s, along with an upturn in student enrollments due in part to an influx of families from the northeastern and central states. Governors and other leaders in a number of southern states have lead vigorous reform efforts to improve the educational standing of their states by closing the gaps in spending and student achievement between the South and other U.S. regions.

There has been an emphasis on holding schools and staff accountable for what they do—with accountability being defined more in terms of results than the adherence to specific processes and procedures (such as how funds are spent or what instructional materials to use). One type of accountability measure adopted by several states is "education bankruptcy" statutes. Such statutes call for the state taking over administration of local school districts that do not meet certain standards. In 1989, the state of New Jersey took over the operation of the Jersey City schools under such a measure.

States have acted vigorously and aggressively in the area of school improvement in the 1980s because they believed that local school districts were not producing well-educated students. Yet the cooperation and support of local leaders is necessary to implement the new state initiatives effectively. Some local school districts also have mounted school improvement efforts.[70] The roles of the state and local school districts are undergoing change and it is not yet clear how, or if, the reform efforts of the 1980s will have changed fundamentally the relationships between them.

There are also questions about how reform measures will interact with demographic changes. Will any progress resulting from reform efforts be overwhelmed by the growing percentage of poor, minority, and non-English-speaking students—the most difficult and expensive to educate? Will the reforms concentrate on raising the performance of advantaged students and

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Improving the academic skills of minority students is a vital policy issue for the 1990s.

ignore, or worse, inadvertantly push out, disadvantaged students?

Conclusion

As we enter the last decade of the 20th century, our education system is in a period of rapid change; this will certainly continue into the foreseeable future. Demographic trends are likely to ensure that school systems will stay in flux. Added to these factors is the increasing realization that education is an integral part of our country's economic competitiveness in the international arena, and that the average performance of American students today is not adequate to meet the labor force needs of the future.

It is too early to determine whether the flurry of finance and education reforms initiated during the past two decades will produce better schools, students, and teachers. In many ways the quest for excellence runs counter to the demographic tide which is bringing not only a rising share of poor, minority, and non-English-speaking students but also a growth in elderly and nonfamily households less likely to support increases in education funding. Student enrollments will increase in the next decade, creating a demand for additional teachers. Yet, the teaching profession, underpaid and underappreciated when compared to many other professions, must attract new entrants just as the U.S. begins to experience a shortage of educated workers in other, better-paying fields. Also, the pool of available teachers is aging, suggesting a substantial attrition of teachers to retirement over the next two decades.

In addition to the economic deprivation of some students, educators must grapple with the social conditions in which children today are growing up. The pressures to use drugs, become sexually active, and take various other risks with their young lives seem shockingly great. The benefits of pursuing a quality education in preparation for adult careers and responsibilities seem distant to too many children. The schools are being asked to smooth over the results of social pressures, persistent poverty, racism, and ethnic differences to instill academic skills and a love of learning in American students.

We are still struggling to understand which policies and programs are effective in educating youth. The greatest challenge facing schools today is to simultaneously strive for excellence and serve the needs of the nation's disadvantaged students. The demands being placed on the educational system by social and economic conditions are very great, indeed; their effects should not be underestimated. □

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Discussion Points

1. Describe the trend toward an increasing proportion of minority children in the United States. How will this change American education?

2. What impact have changes in the regional distribution of U.S. population had on state and local education systems?

3. Discuss the ways that the baby-boomers (those people born between 1946 and 1964) have affected and will continue to affect the education system as they pass through the various stages of the life cycle.

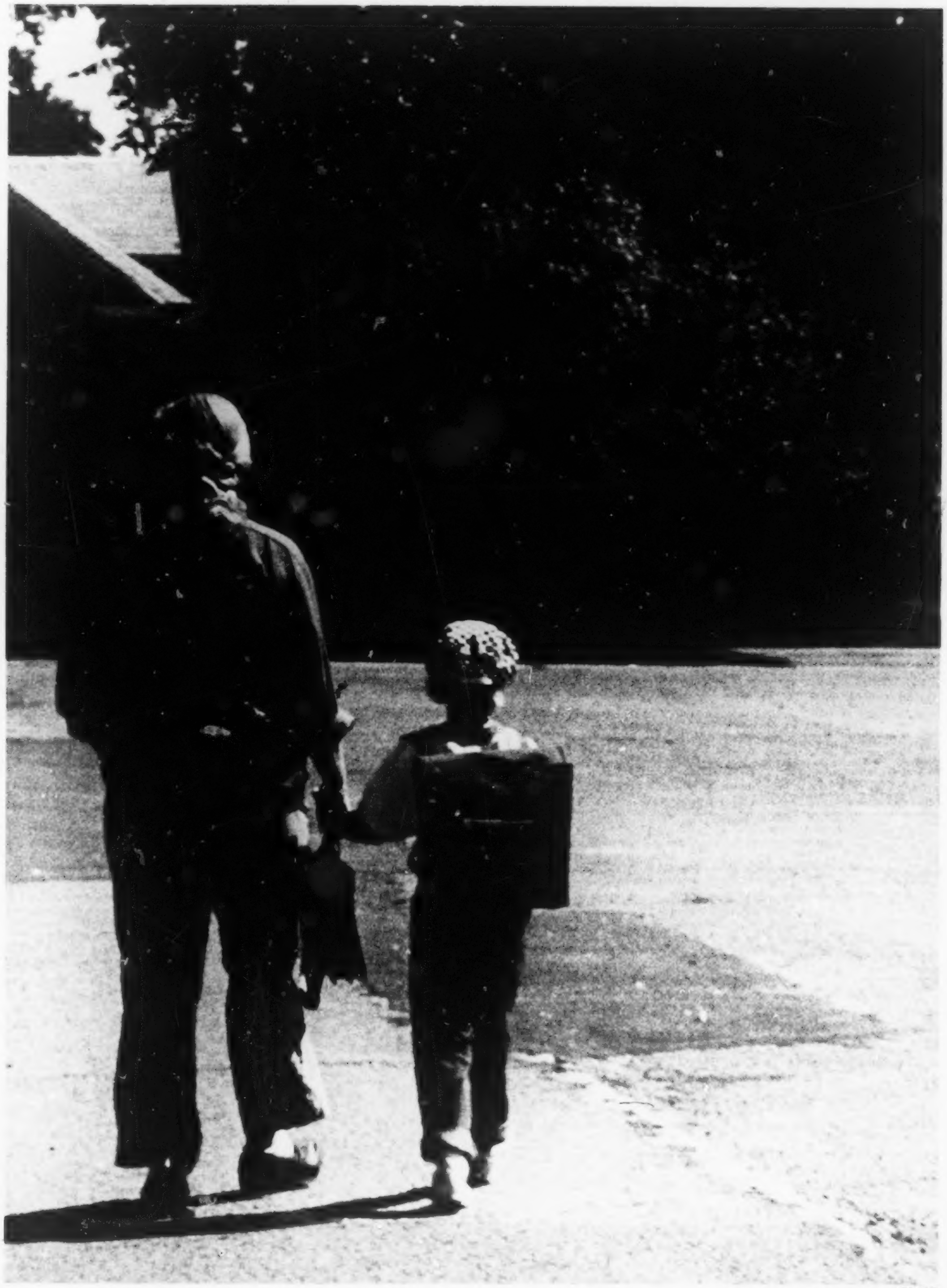
4. Discuss the long- and short-term impacts on the U.S. society and economy of low educational achievement of the "underclass." Consider some of the policies that have been implemented to address low educational achievement. Have these policies been effective?

5. List the factors that point toward a future teacher shortage. How is this problem being addressed? Consider some other policies that might address this problem.

6. How do changes in population affect the tax base? (Consider: age structure, regional distribution, ethnic and racial distribution, etc.) Describe how a changing tax base might affect the funds allocated for education.

7. Discuss the impact that changing lifestyles (i.e. teenage parents, working mothers, single parent families, etc.) may have on children's educational achievement and on the U.S. education system.

Prepared by Kimberly A. Crews



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POPULATION BULLETIN
Vol. 45, No. 1, June 1990

America's Children: Mixed Prospects

By Suzanne M. Bianchi

PRB A publication of the
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Abstract—The prospects of U.S. children are uneven and uncertain. Today's youngsters are more apt to have fewer siblings, come from a broken home, have a working mother and pass time as a "latchkey kid." More children are in child care than in the past and there has been a significant move toward center-based care. Increasingly, preschool-age children, particularly from relatively well-off families, are enrolled in pre-kindergarten educational settings.

Declining family size and recent American prosperity have created material well-being for most of today's children. But the development of an underclass has also increased the number of children trapped in poverty. The stagnant wages of the "working poor" and the growing number of mother-only households have exacerbated income inequality among children from different family circumstances.

The decline in educational achievement scores, which characterized the 1970s, has, for the moment at least, ended and the average school performance even improved slightly in the 1980s. In addition, more students, especially black students, completed high school in the 1980s. And the physical health of the average American child has improved dramatically since 1960.

Most American children lead happy, healthy lives and several trends portend well for the future of most youngsters. But the picture is marred by the problematic future of the children of the underclass and the uncertain psychological impact of America's transformed family life.

Editor: Mary Mederios Kent
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The *Population Bulletin* is published four times a year and is distributed along with the other publications listed on the back cover to members of the Population Reference Bureau. If you would like to order additional copies of this *Bulletin* or join PRB, contact the Population Reference Bureau, Inc., Circulation Department, 777 14th Street, N.W., Washington, D.C. 20005; telephone: (202) 639-8040. Visa and MasterCard accepted. Annual PRB membership rates *inside the United States:* individuals, $45; educators, $30; students, $25; libraries/nonprofit organizations, $55; other organizations, $200. *Outside the United States:* individuals, $56; educators, $38; students, $28; libraries/nonprofit organizations, $68; other organizations, $250.

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The suggested citation, if you quote from this publication, is: Suzanne M. Bianchi, "America's Children: Mixed Prospects," *Population Bulletin*, Vol. 45, No. 1 (Washington, D.C.: Population Reference Bureau, Inc., June 1990). For permission to reproduce substantial portions from the *Population Bulletin*, write Population Reference Bureau, Inc., Permissions, 777 14th Street, N.W., Washington, D.C. 20005.

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POPULATION BULLETIN
Vol. 45, No. 1, June 1990

Evelyn Aikman/Danny Conant

America's Children: Mixed Prospects

By Suzanne M. Bianchi

Suzanne M. Bianchi is a demographer with the U.S. Bureau of the Census. She received her doctorate in Sociology from the University of Michigan. Her research focuses on family compositional change and issues of race, gender, and economic inequality. She is co-author (with Daphne Spain) of American Women in Transition, *a volume in the 1980 Census Monograph Series. Her publications on children include "Children's Contact with Absent Parents,"* Journal of Marriage and the Family, *1988 (with Judith Seltzer) and a forthcoming Census Bureau report on "Family Disruption and Economic Hardship: The Short-Term Picture for Children" (with Edith McArthur).*

The author thanks Rosalind Bruno, Donald Hernandez, Mark Littman, Larry Long, Judith Seltzer, and Janet Yax for review and comments and Mary Kent of the PRB staff for editorial assistance in preparing this Bulletin. *The ongoing research support of the Center for Demographic Studies of the Census Bureau, in particular the assistance of Pamela Smith, is also gratefully acknowledged.*

Children are beloved by parents because they enrich the present and promise an unbroken continuation of life and family. They are valued by society because they embody the future. Governments, as well as families, accept a responsibility for ensuring the well-being of children by investing in education and by trying to provide a safe and wholesome environment in which they can live. But these investment costs are escalating. A number of demographic, social, and economic trends are sorely testing the public commitment to children's needs, and possibly eroding the well-being of some groups of U.S. children.

The rapid growth of the elderly share of the U.S. population may undermine the political viability of child-related public expenditures as the needs of the elderly compete with education and child care for a shrinking pool of public funds. The rising costs of housing and college prevent many families from providing their children with quality homes and college educations. The movement of middle-class families to the suburbs has concentrated poor and minority children in central cities all too often dominated by violence and drugs.

Social changes—in particular the high divorce rate and increase in out-of-wedlock births—have placed more children in single-parent homes, usually headed by their mother, for part of their formative years. And female-headed families are much more likely to be poor. In 1988, one in five U.S. children was living in poverty. The entrance of more and more mothers of young children into the paid labor force has placed more children in the care of other relatives or nonfamily members.

These dramatic trends raise several important questions about the public versus private role in caring for children. The public investment in children varies tremendously among countries, even within the industrialized world. Education is recognized as a necessary governmental responsibility in most countries. Some European countries, concerned about low birth rates and impending population decline, also offer sizable financial incentives to encourage couples to have children, and provide strong support systems and generous social insurance benefits for families with children.[1] In the United States, aside from education and related programs, childrearing has traditionally been considered the responsibility of the family.

It is difficult to assess the value of children to individuals and families, or whether that value has changed over time. Most individuals seem to want children, but the actual number desired has fallen, probably due to broad social and economic trends affecting the costs and benefits of having children rather than a change in the intrinsic liking for or the value of children. As effective birth control has become widely available, couples may have only the number of children they want.

Public support for education and other programs to benefit children and families may diminish as smaller percentages of American households have children. In 1988, only 38 percent of all households included children under age 18.[2] The majority of adults do not live with children on a day-to-day basis, although many of these individuals are grandparents, aunts, or uncles, and, hence, have some appreciation for the needs of children.

Samuel Preston, former president of the Population Association of America, pointed out in 1984 that the situation of children should have improved since the 1960s because—as their numbers declined—there was less competition and there were more resources available per child; yet, many socioeconomic indicators suggested just the opposite.

Preston argued that public support and investment in dependent segments of the population was actually greater when a population group was increasing in size. He contrasted the well-being of children with that of the other "dependent" segment of the population, the elderly, a group that has been growing dramatically in size and has fared quite well while children have not.[3] In general, subsequent research has confirmed that the economic situation of children has worsened relative to the elderly, although the absolute level of well-being of children has not necessarily deteriorated.[4]

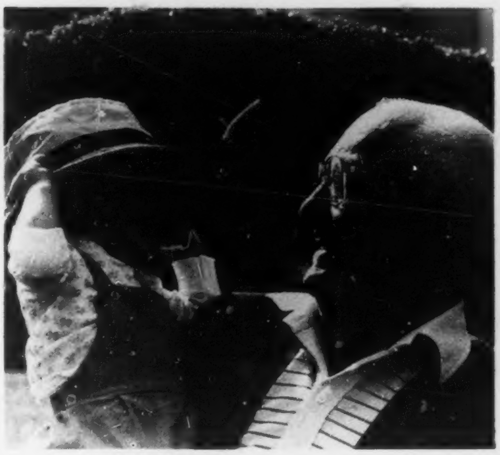


Image Productions

The elderly have improved their economic situation in the 1980s, while children have not.

Preston has focused much needed attention on the lives of children and pointed out that if, indeed, the well-being of children was being neglected, there would be high social costs when those children reached adolescence and adulthood. The social and demographic trends which have led to the deterioration in the status of children are not likely to reverse any time soon.

Fertility is likely to remain low, and hence the size of the population under age 18 will decline as a proportion of the total population. Not only will the children's share of the population decrease but more of those children will be minorities. Americans will have to realize that they have a stake in seeing all children, not just their own, adequately cared for, properly housed, and well educated.

Finally, the family circumstances of children have been permanently transformed through high rates of divorce and the increasing labor force participation of mothers. Family disruption, which places many children at economic risk, is likely to remain high. The system for caring for young children and for transferring income, both privately and publicly, from the working population to the dependent population will have to adapt to a new social reality in order to allow all children the opportunity for a productive adult life.

How children are faring—economically, socially, psychologically, and educationally—continues to be an important question. And how much government involvement is needed to assure at least a minimum level of well-being for all children continues to be debated.

Changing Numbers of U.S. Children

During 1940, the year before the United States entered World War II, about 2.6 million American babies were born. As the war ended, the now famous "baby boom" generation was launched. The number of births jumped to 3.6 million by 1950 and crested at around 4.3 million in the early 1960s. The number of U.S. births in 1960 was two-thirds higher than in 1940.

As public institutions, particularly schools, were beginning to adjust to the increased number of children, births started a spiral downward, bottoming out at 3.1 million in 1975. Even at this low point, the number of births was 23 percent higher than in 1940. Schools built during the 1960s to handle the burgeoning number of students were closed or converted to other uses because there were not enough children to fill them. Educators and city planners were on a roller coaster ride: the problems and solutions of one decade were opposite those of the next. And there was considerable apprehension about what would happen in the 1970s and 1980s as the baby boomers began having their own children.

Even if baby boom couples had only two births, on average, demographers knew that the number of births would go up because there would be so many women of childbearing age. But how much would births increase? Baby boomers waited longer to get married and start having children than did their parents; consequently, the number of births continued to decline. Some demographers projected that 25 or even 30 percent of the baby boomers would never have children, a record high percentage.[5]

By the close of the 1980s, however, it became clear that the baby boom couples had simply delayed childbearing. Since the mid-1970s, the birth rates for women in their 20s have been relatively stable whereas the rates for women in their 30s have increased by one-third or more.[6] As we enter the 1990s, a large cohort of women is in its 30s.[7] While the birth rates for this group of some 20 million women are far below the high rates during the baby boom, the projections of childlessness made just a few years ago are probably too high: 15 to 18 percent of women rather than 25 to 30 percent will not have children. Childless women in their early 30s today are much more likely to have (or still plan to have) a child than were women of the same age just 10 or 15 years ago.[8]

Although the U.S. birth rate has remained below the replacement level of two children per couple, the number of births has increased steadily since the mid-1970s. The National Center for Health Statistics reports 3.8 million births for 1987, 3.9 million in 1988, and provisional data for 1989 suggest that the number of births exceeded 4 million for the first time since the baby boom. More significant, the U.S. birth rate itself may have increased slightly in recent years. The Total Fertility Rate (TFR), the average number of births a woman has during her childbearing years, has been around 1.8 since the late 1970s, well below the 2.1 level needed to replace the population. In 1987, it rose to 1.9 and provisional figures show it close to 2.0 in 1989. That fertility increased at the end of the 1980s, after remaining stagnant for nearly two decades, surprised many demographers and threw off population projections based on a continuation of the 1.8 TFR into the next century. The middle series (or most likely scenario) of the Census Bureau's last set of projections, published in January 1989, already show too few children under five for 1990.

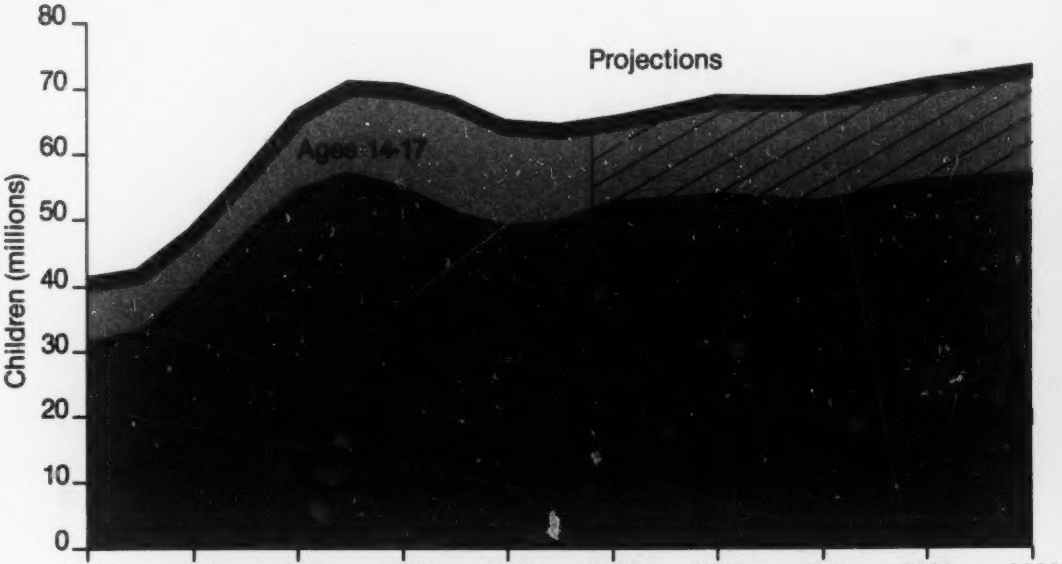
The number of births will decline in the future as the women of the large baby boom generation move out of the childbearing ages and are replaced by the smaller cohorts of women born during the late 1960s and early 1970s. However, just as the number of births did not start increasing when demographers expected in the early 1970s, the recent rise in births shows that baby boom women have not finished having their children quite as early as expected either.

What does all this mean in terms of the size of future cohorts of children? The number of children under age five increased by 11 percent between 1980 and 1988 and is projected to crest around 1990 and then decline by 2000. The elementary school-age population started to increase again in the late 1980s, and may continue a slow ascent into the next century. The high school-age population, in decline since the early 1980s due to the low numbers of births in the 1970s, will start to rise again in the 1990s (see Figure 1).

Perhaps more important to the status of U.S. children, the ratio of children to the population of working age has slipped from a high of 66 per 100 in 1965 to 42 per 100 in 1988, and is expected to decline further, perhaps reaching 36 per 100 in 2030.

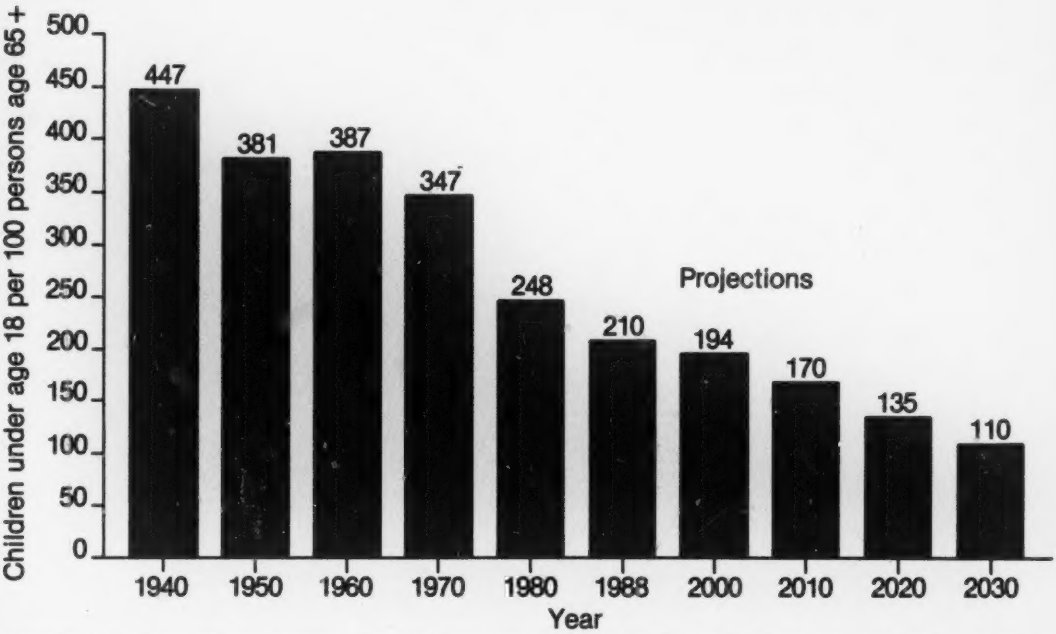
The ratio of children to the elderly has dropped even more dramatically. In 1940, when mortality at older ages was high by today's standards, there were 447 children under age 18 for every 100 persons over age 65. This ratio has declined steadily, although, in 1988, chil-

Figure 1. U.S. Children by Age Group, 1940–1988, and Projections to 2030



Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, Numbers 1018, 952, and 1045; and author's estimates based on published and unpublished data.

Figure 2. Ratio of Children to the Elderly, 1940–1988, and Projections to 2030



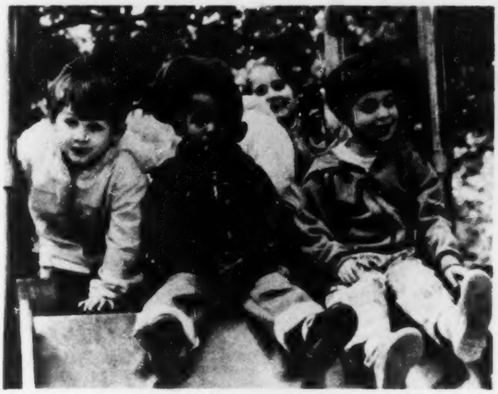
Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-25, Numbers 1018, 952, and 1045; and author's estimates based on published and unpublished data.

dren still outnumbered the elderly by more than two to one. By the year 2030, with the older population continuing to grow faster than the younger, there will be nearly equal numbers of American children and elderly (see Figure 2).

A Transformation of Family Life

A growing proportion of U.S. children see their parents divorce and spend much of their childhood without a father at home. This trend has characterized all racial and ethnic groups, but differences between the living arrangements of black and white children have grown during the past three decades.

Between 1950 and 1981, the number of divorces increased from 385,000 to 1.2 million annually and the divorce rate more than doubled. Since 1981, the number of divorces and the divorce rate have leveled but remain high. In 1986, there were 1,178,000 divorces, 4.9 per 1,000 population.[9] Provisional data suggest a slightly lower rate (4.8) for 1988 and 1989.


Catherine Mill

At least one-half of today's children will live in a single-parent family before age 18.

Box 1. Adopted Children

Do adopted children differ from other children? In 1988, an estimated 1 million children were living with adoptive parents. Black children are just as likely to be adopted as children of white, Asian or other races, although blacks are more likely to be adopted by a relative. Most adoptees are native-born Americans; of the approximately 114,000 children adopted in 1986, 91 percent were born in the United States. The number of foreign adoptions appears to have increased in recent years. In 1986, as many as 10,000 foreign babies were adopted, up from about 5,000 in the early 1980s.

Throughout the 1970s and 1980s, roughly 50,000 children per year were adopted by unrelated parents, a significant decline since 1970 when a record 89,000 children were adopted. In addition to the generally lower fertility during those years, two factors account for much of the decline in adoptions since 1970: easier access to abortion to prevent unplanned births and the growing tendency of unmarried mothers to keep their babies rather than give them up for adoption.

In 1987, 1.7 percent of women ages 20 to 44 had ever adopted a child, compared to 2.2 percent in 1982, according to interview data from the National Center for Health Statistics. White and black women were just as likely to have adopted a child, but both were more likely to adopt than Hispanic women.

While bearing a child is a private matter, often reflecting the decision of only two people, adoption entails a very public statement of intent and scrutiny of a couple's (or individual's) finances and personal living situation. In 1987, 41 percent of adoptions were arranged by a public agency, 35 percent by a private agency, and an additional 24 percent through a lawyer.

Most children are adopted when they are babies. Among adopted children of all ages, 82 percent had been placed with adoptive parents prior to turning one year old, but the percentage being placed as infants may have been lower in the 1980s (73 percent) than in the 1970s (83 percent).

How do adopted children fare compared to other children? The sketchy evidence available suggests that the parents who adopt unrelated children tend to be older, more educated, and have higher incomes than the average couple. Since many couples adopt only after spending some years trying to have their own child, then making their way through the adoption process, they tend to have been married longer and are more likely to have well-established careers than other parents. Also, since finances enter into adoption approval, adoptive parents tend to be better-off financially.

All these factors work to the benefit of the child's well-being. Adopted children tend to live with higher income families than the average, and an overwhelming majority are reported to be in very good health. While we have little evidence about other aspects of well-being, adopted children at least begin their new lives with certain advantages.

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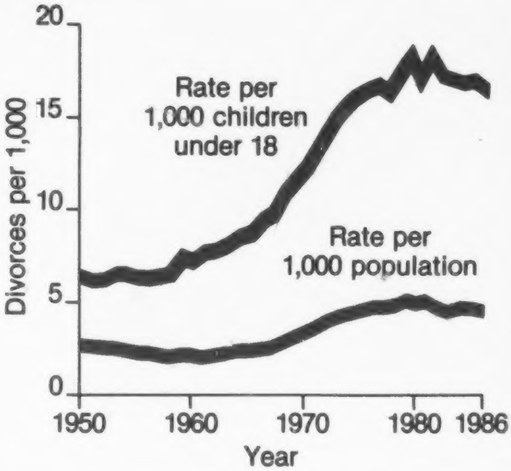
Since 1972, more than 1 million children each year have seen their parents divorce, a three-fold increase since 1950. But the percentage of children whose parents divorce has risen even faster. In the 1950s, only six out of every 1,000 children experienced parental divorce in a given year but in the 1980s, this rate varied between 17 and 19 per 1,000 (see Figure 3).

Another trend that has altered children's family lives is the increase in the number of children born to unmarried mothers. In 1987, one in four births in the U.S. was to an unmarried mother—up from only one in 20 births in 1960 (see Figure 4).

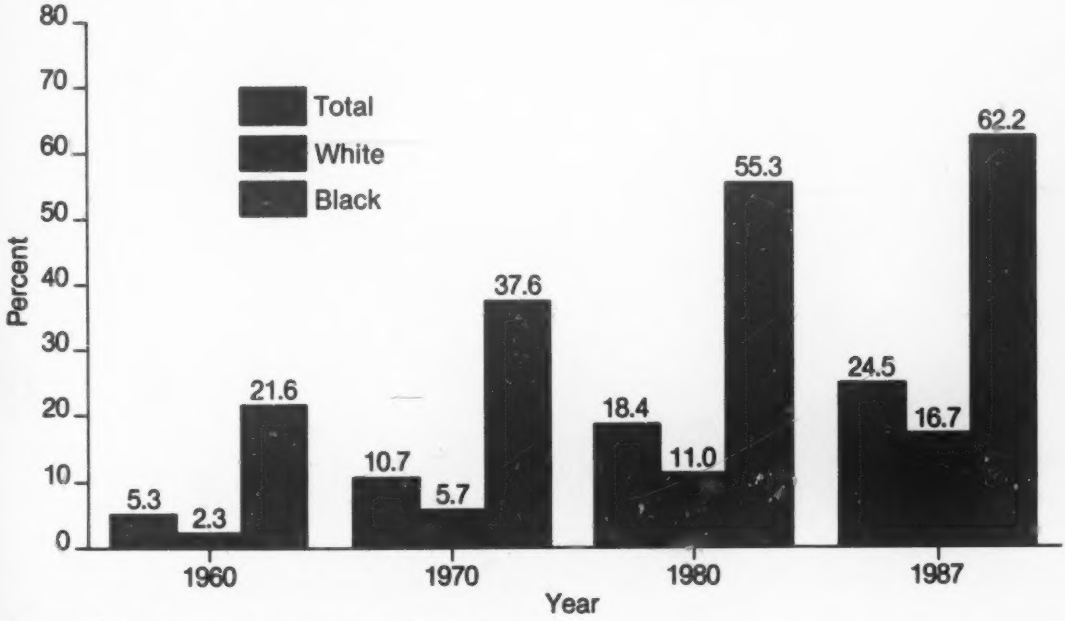
Because of the high divorce rate and the increase in out-of-wedlock births, a smaller proportion of children are living in two-parent households. In 1960, 88 percent of children lived with two parents, but by 1988, this percentage had

Figure 3. Divorce Rates for the U.S. Population and Divorces per 1,000 Children under Age 18, 1950–1986



Source: National Center for Health Statistics, *Monthly Vital Statistics Reports*, Vol. 38, No. 2.

Figure 4. Percentage of Births to Unmarried Mothers, by Race; 1960, 1970, 1980, and 1987



Source: National Center for Health Statistics, published data.

dropped to 73 (see Table 1). But only about 60 percent lived with their two biological parents in 1988; the remainder lived with a parent and stepparent.[10]

Between 1960 and 1988, the percentage of children living with one parent, usually their mother, increased from 9 to 24 percent. The percentage living with their father only increased from 1 to 3 percent between 1960 and 1988. During this period, 3 to 4 percent of children lived with neither parent, but most of these resided with some other relative.

Proportionately fewer children today than 30 years ago can count on growing up in a household that includes both their mother and their father. Demographers, using life table (actuarial) techniques to project current trends into the future, estimate that at least one-half—perhaps as many as 60 percent—of the children born today will spend some part of their childhood living in single-parent families. Demographer Larry Bumpass has estimated that, among children born to married mothers in the 1963–65

Table 1. Living Arrangements of Children under 18, by Race and Hispanic Origin: 1960, 1970, 1980, and 1988

Living arrangement	1960	1970	1980	1988
	(numbers in thousands)			
All races				
Children under 18	63,727	69,162	63,427	63,179
Percent living with:				
Two parents	87.7	85.2	76.7	72.7
One parent	9.1	11.9	19.7	24.3
Mother only	8.0	10.8	18.0	21.4
Father only	1.1	1.1	1.7	2.9
Other relatives	2.5	2.2	3.1	2.3
Nonrelatives only	0.7	0.7	0.6	0.7
White				
Children under 18	55,077	58,790	52,242	51,030
Percent living with:				
Two parents	90.9	89.5	82.7	78.9
Mother only	6.1	7.8	13.5	16.0
Father only	1.0	0.9	1.6	2.9
Other	1.9	1.8	2.2	2.2
Black				
Children under 18	8,650	9,422	9,375	9,699
Percent living with:				
Two parents	67.0	58.5	42.2	38.6
Mother only	19.9	29.5	43.9	51.1
Father only	2.0	2.3	1.9	3.0
Other	11.1	9.7	12.0	7.4
Hispanic				
Children under 18	na	4,006	5,459	6,786
Percent living with:				
Two parents	na	77.7	75.4	66.3
Mother only	na	na	19.6	27.2
Father only	na	na	1.5	3.0
Other	na	na	3.5	3.6

Notes: Excludes persons under 18 years old who were maintaining households or families. Black = nonwhite in 1960. Persons of Hispanic origin may be of any race.

na—not available.

Source: U.S. Bureau of the Census, "Marital Status and Living Arrangements: March 1988," *Current Population Reports*, Series P-20, No. 433, Table A-4.

period, about one in five experienced their mother's marital separation before reaching age 16. Twice the proportion of children (over two in five) born in the 1977–79 period will experience family disruption.[11]

Racial and Ethnic Differences

Perhaps the most striking changes in children's family lives are the persistent, and increasing, differences between white and minority children. The proportion of white children living with two parents declined by 12 percentage points between 1960 and 1988, but declined by 28 percentage points for blacks (see Table 1). In 1988, almost four in five white children lived in two-parent families compared with about two in five black children. The percentage of Hispanic children in two-parent families has also slipped, from 78 percent in 1970 (the first year for which we have data) to 66 percent in 1988.

Black children who do live with two parents are less likely than whites to be living with both biological parents.[12] Only about 27 percent of black children, compared with around 66 percent of white children, lived in a household which included both their biological mother and father in 1988 (see Figure 5, page 12).

The likelihood of spending all or part of childhood in a mother-only family is much greater for black than for white children. In 1988, the majority of black children (51 percent) lived with their mother only, compared with 16 percent of white and 27 percent of Hispanic children. Life table estimates based on data from the late 1970s suggest that 42 percent of white children, compared with 86 percent of black children, will live with their mother only for part of their childhood.

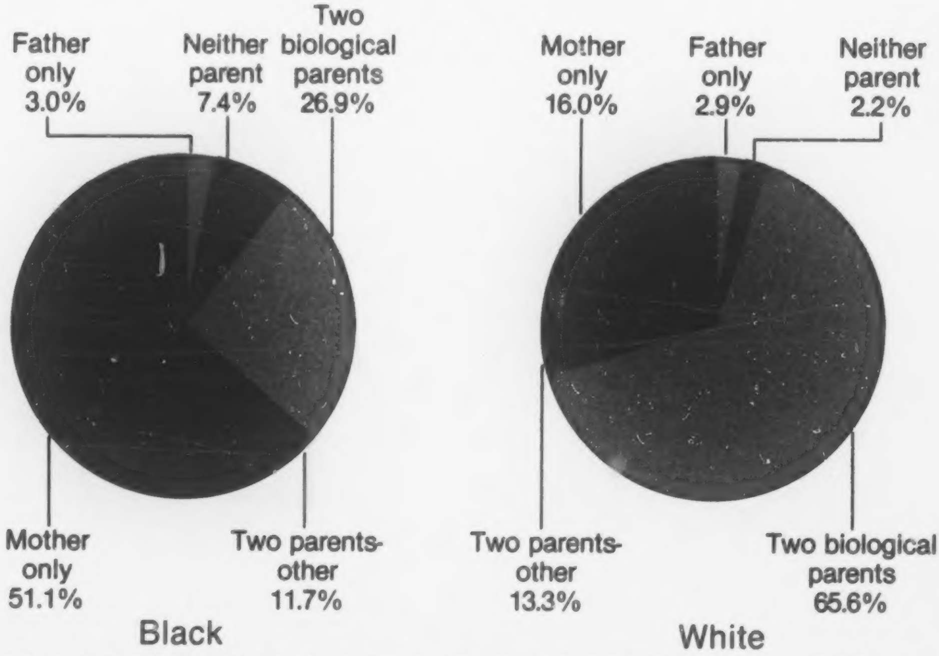
The proportion of children who lived with their father only (3 percent) was similar for whites, blacks, and Hispanics by 1988. About 7 percent of black children, compared with 2 percent of white and 4 percent of Hispanic children, lived in a household which included neither parent in 1988. Most of these children were living with grandparents or other relatives.

U.S. Dept. of Health and Human Services

Black children are more likely than white to live with their mother only, or with a stepparent.

Black children are also much more likely to live with a never-married mother. In 1987, 62 percent of black babies in the U.S. were born to unmarried mothers compared with 17 percent of white babies born that year (see Figure 4, page 9). However, an increased proportion of single parents of both races have never married. Between 1960 and 1988, the proportion of white children living with a never-married single parent grew from less than 2 percent to 18 percent, with much of the increase occurring in the 1980s. Over the same period, the percentage of black children in single-parent families who lived with a never-married parent grew from 10 to 54 percent. Among Hispanic children,

Figure 5. Living Arrangements of Black and White Children, 1988



Note: Data from June 1985 Current Population Survey were used to estimate the proportion of children who were living with two biological parents.

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 433; and Series P-23, No. 162.

for whom data are available only for the 1980s, there was also an increase. By 1988, one-third of Hispanic children in single-parent families lived with a never-married parent.

This increase in the proportion of children with never-married mothers has negative consequences for the well-being of children because these mothers tend to have lower incomes and higher unemployment than other women, even other single mothers. The average family income of children who live with a never-married mother is only around 40 percent of that for children who live with either a divorced or a widowed mother (see Table 2). Widowed parents and their children often receive Social Security income and other survivor benefits which tend to be much more generous than the public assistance available to never-married mothers and their children. Children of divorce are much more likely to receive economic support from their fathers.

In addition, never-married mothers are usually younger and have less education than other single mothers, and they often have other characteristics that make it harder for them to get and hold well-paying jobs. Over one-third of children living with a never-married mother have a mother under age 25. Only 55 percent of these children lived with a mother who had completed high school, compared with 80 percent of children living with a divorced mother. Only about one-third of children with never-married mothers have a mother who is employed, compared with over 70 percent of children with divorced mothers and almost one-half of children with separated or widowed mothers.

Many children with never-married mothers receive financial help from other working adults (usually another relative) in the same household. For 45 percent of children living with a never-married mother, there were other adults living in their household in 1988—an apparent increase since the 1960s. This figure was considerably lower (around 34 percent) for children living with divorced or separated mothers. Other adult earners often contribute a significant component of the income available to children in single-parent families. This may have dampened the economic disadvantages brought by the increase in the number of children born to never-married mothers.[13]

In sum, the increase in the percentage of children growing up in single-parent families, and the widening racial differences in living arrangements, are of concern because of the negative economic consequences. A growing body of research points to long-term, negative consequences for children in social and academic realms as well.

Children and Poverty

Much of the research on children's economic well-being has focused on children in families with the fewest financial resources. Official poverty statistics, available back to 1959, show that children have consistently had a higher probability of being poor than adults of working age. Three dimensions of children's experience of poverty are important to highlight. The first is age—how children's likelihood of being poor compares with working-age adults and the elderly over time. A second is the trend in the poverty status of children in two-parent families as compared with children in one-parent families. Third, closely tied to the family structure dimension, is the racial differential in childhood experience of poverty.

In the 1960s, both the number and the percent in poverty declined substantially for persons under age 18. Between 1959

Table 2. Selected Family Characteristics of Children in Mother-Only Families by Marital Status of Mother, 1988

	Divorced	Separated, spouse absent	Widowed	Never married
		(numbers in thousands)		
Children under 18 years	5,010	3,371	838	4,302
Percent with mother under age 25	4.6	10.4	2.5	35.2
Percent with mother who has completed high school	80.1	62.5	63.2	54.9
Percent with mother who has completed college	11.6	7.2	10.0	2.0
Percent with mother who is employed	71.4	49.1	45.8	34.0
Percent living in households with adults other than mother	33.8	33.2	40.6	45.3
Mean family income	$16,383	$10,294	$17,868	$7,054

Source: U.S. Bureau of the Census, "Marital Status and Living Arrangements: March 1988." *Current Population Reports*, Series P-20, No. 433, Table 9.

and 1969, the number in poverty dropped from 18 million to 10 million and the official poverty rate fell from 27 to 14 percent (see Table 3). During the 1970s, as economic growth slowed, the number of children in poverty leveled off at around 10 million. The poverty rate was nearly 16 percent for the population under age 18. After 1978, the number of children in poverty rose, peaking at almost 14 million in 1983, coinciding with the severe economic recession of the early 1980s. Poverty rates have declined since, but in 1988, an estimated 20 percent of children lived in poverty. In 1988, 12.6 million children lived below the poverty level, one-quarter more than the number of children in poverty throughout the 1970s.

The rise in the poverty rates of children during the 1980s is in sharp contrast to the situation for those at the other end of the age distribution. The poverty rate for persons over age 65, which exceeded the rate for children until the mid-1970s, declined to 12 percent in 1988. However, compared to younger Americans, a high proportion of the elderly have incomes just over the poverty line (incomes 100 to 125 percent of the poverty threshold).[14] One factor that has aided the situation for the elderly is that Social Security benefits are indexed to the Consumer Price Index and have risen with inflation.

For children, on the other hand, the decline in poverty halted in the early 1970s, and the economic situation of children at the bottom of the income distribution has deteriorated. Why has the situation worsened for children at greatest economic risk? Part of the story has to do with children in mother-only families. The continued growth in the number of children in these families combined with some increase in the likelihood that they will live in poverty (rates in the 1980s have been higher than they were in the late 1970s) has brought more

Table 3. Number and Percent below Poverty among Children, Working-Age Adults, and the Elderly, by Race for Selected Years, 1959–1988

	Children under age 18		Working-age adults ages 18–64		Elderly age 65 and over	
	Number (thousands)	Percent	Number (thousands)	Percent	Number (thousands)	Percent
All races						
1959	17,552	27.3	16,457	17.0	5,481	35.2
1969	9,691	14.0	9,669	8.7	4,787	25.3
1979	10,377	16.4	12,043	8.9	3,682	15.2
1983	13,911	22.3	17,767	12.4	3,625	13.8
1988	12,584	19.7	15,812	10.5	3,482	12.0
White						
1979	6,193	11.8	8,110	6.9	2,911	13.3
1983	8,862	17.5	12,347	10.0	2,776	11.7
1988	7,483	14.6	10,867	8.3	2,595	10.0
Black						
1979	3,833	41.2	3,478	23.8	740	36.2
1983	4,398	46.7	4,694	29.2	791	36.0
1988	4,364	44.2	4,278	24.4	785	32.2
Hispanic						
1979	1.535	28.0	1,232	16.8	154	26.8
1983	2,312	38.1	2,148	22.5	173	22.1
1988	2,653	37.9	2,501	20.7	225	22.4

Source: U.S. Bureau of the Census, "Money Income and Poverty Status in the United States: 1988," *Current Population Reports*, Series P-60, No. 166, Table 19.

Table 4. Poverty Status of Families with Children under Age 18 by Family Type for Selected Years, 1959–1988

	Total families (thousands)	Families below poverty Number (thousands)	 Percent
Female-headed families, no husband present			
1959*	2,544	1,525	59.9
1969*	3,384	1,519	44.9
1979	6,035	2,392	39.6
1983	6,622	3,122	47.1
1988	7,361	3,294	44.7
Married-couple families			
1959*	24,448	3,818	15.6
1969*	26,443	1,707	6.5
1979	25,615	1,573	6.1
1983	25,216	2,557	10.1
1988	25,598	1,847	7.2

*Data for 1959 and 1969 include a small number of male-headed, single-parent families.

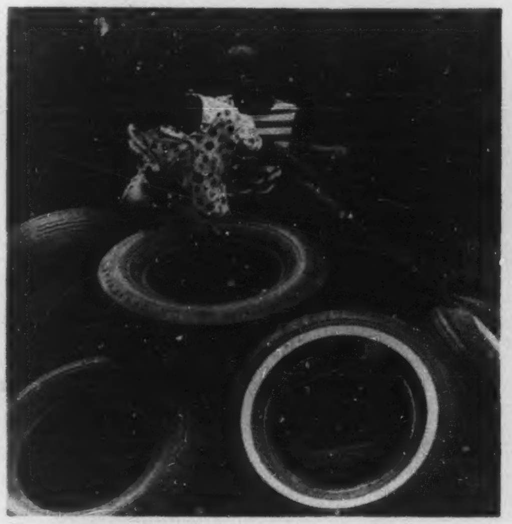
Source: U.S. Bureau of the Census, "Money Income and Poverty Status in the United States: 1988," *Current Population Reports*, Series P-60, No. 166, Table 20.

of these children into poverty.

Although the poverty rate declined for children living in mother-only families during the 1960s, the number of children living in these families was growing. The greater number of children in mother-only families—families at higher risk of poverty—offset the decreased probability of being poor among these families. The poverty rate for families maintained by a woman declined from 60 to 45 percent during the 1960s, yet the number of poor mother-only families stood at 1.5 million in 1969, virtually unchanged from the number of such families in poverty in 1959 (see Table 4). The 1970s witnessed a substantial growth in the number of families maintained by a woman and a resulting 57 percent growth in the number of poor mother-only families with children.

Children who live in mother-only families have almost a one in two chance of being in poverty in contrast to a less than one in ten chance for children living with two-parents. Children in mother-only families suffer economically from three factors: their mothers usually have low earnings, their fathers often do not contribute to their support, and public assistance benefits have not kept up with inflation during the 1980s.[15]

Another part of the explanation for the growing poverty of children in the 1980s lies in the increased number of two-parent families in poverty. Poverty fluctuations for children in two-parent families



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The income disparity between more and less affluent children may have worsened in the 1980s.

parallel changes in real wages of men who work full time. According to Harvard researchers Mary Jo Bane and David Ellwood, the increase in the poverty of children in two-parent families during the 1980s is due largely to the stagnation in wages of fathers. Poverty rates for children in these families might have been even higher in recent years but for three compensating trends: increased labor income provided by working mothers, smaller families, and delayed childbearing. Poor two-parent families are often the "working poor." Most do not qualify for any public assistance except food stamps; many are not covered by health insurance. Bane and Ellwood argue that, after public and private transfers, children in poor two-parent families may be the poorest of the poor.

Children in two-parent families, however, are less likely to be persistently poor than are children in one-parent families, which eases the lack of public assistance income available to these families.[16] Also, poor children living in two-parent families are much more likely than those in mother-only families to have at least one parent in the labor force. In 1988, nearly one-half of poor female-headed families contained no working adults; the comparable percentage for poor two-parent families was 17 percent.[17]

The financial and emotional stress associated with a father's unemployment can lead to marital disruption, ultimately increasing long-term childhood poverty by moving children into mother-only families. Data from the Census Bureau's Survey of Income and Program Participation show that two-parent families that experience marital breakup often have endured more unemployment of the father and greater financial difficulties than intact families.

Another important characteristic of childhood poverty is the substantial racial disparity. The racial gap in poverty has decreased since 1959, but the growing proportion of black children living in mother-only families has sustained racial differences in childhood poverty because such families are more likely to be poor.[18] In 1988, 56 percent of black mother-only families with children were poor and over one-half of black children lived in mother-only families. The poverty rate in white mother-only families was also very high (38 percent) but only 16 percent of white children lived in mother-only families.[19] A child's likelihood of residing in poverty was clearly much greater, whether white or black, if he or she lived in a household maintained by a woman rather than in a two-parent household.

A large racial gap persists even for two-parent families; the likelihood of black families living in poverty was twice that of white families. In 1988, 6 percent of white two-parent families, compared with almost 13 percent of black two-parent families, had incomes below the official poverty level.[20] Black men, particularly young black men, are less likely than white men to be steadily employed and earn enough to keep a family above the poverty line.[21] This not only helps explain the racial difference in poverty in two-parent families but also contributes to the greater likelihood of black than white children living in poor mother-only families.

Income of Children's Families

Children's economic well-being is reflected not just in poverty trends but by the average level and distribution of income among families with children. Clearly, the trend toward more children living with a mother only has had adverse economic consequences for children. But other changes have increased the money income available to children. First, the average number of children per family has declined (see Table 5). Both mother-only and two-parent families now have fewer children, on average, than two decades ago. Even though family income has not increased much in real terms since the mid-1970s, it supports fewer children today than in 1970 or in 1980.

Second, the educational level of their parents has increased dramatically. In 1960, 62 percent of children lived with a parent who was at least a high school graduate and 15 percent had a parent who had completed college. These percentages increased to 74 and 20 percent, respectively, by 1980. By 1988, 80 percent of children had a parent who had completed at least four years of high school and 23 percent lived with a parent who had completed at least four years of college.

In 1988, children in single-parent families remained less likely to be living with a parent who was a high school or college graduate than children living with two parents; but the average educational level of parents in both single- and two-parent families improved. Among children living in households maintained by their mother, only 45 percent had a mother who had graduated from high school in 1970, but this figure increased to 67 percent by 1988.

Rising parental educational attainment is a positive trend for children. More educated parents, on average, are better able to provide an adequate family income. They are also typically better equipped to assist children with homework and enhance the learning environment at home.[22]

The final factor, shown in Table 5, which has improved the income situation of children, is the increased likelihood that a child's mother will work outside the home. But, as mothers spend more hours at a job, they spend fewer hours taking care of their children. Although there is concern about whether care children receive while their mothers work is a satisfactory alternative to mother-care, there is little question that the dramatic increase in employed mothers has enhanced the *money income* available to children, at least in two-parent families.

In 1970, two in five children under age 18 had a mother in the labor force; by 1988, three in five did. The increase in mothers' labor force participation occurred for preschool as well as school-age children. In 1970, only 29 percent of children under age six had a mother in the labor force, but by 1988, the majority (53 percent) had a mother who worked outside the home. Among children 6 to 17

Table 5. Selected Characteristics of Children's Families, 1970, 1980, and 1988

	Total			Two-parent			Mother-only		
	1970	1980	1988	1970	1980	1988	1970	1980	1988
Average number of children per family*	2.33	1.89	1.81	2.33	1.91	1.84	2.36	1.87	1.74
Educational attainment of parent* (percent)									
High school graduate	61.9	73.6	80.1	64.1	76.8	83.3	44.5	59.8	67.2
College graduate	14.9	19.7	22.6	16.3	22.6	26.3	3.2	6.3	8.2
Percent of children with mother in labor force									
Children under age 18	39.2	53.7	61.7	37.6	51.7	61.7	53.2	62.5	61.6
Under age 6	28.6	43.4	52.7	27.6	42.2	53.7	40.4	50.3	47.4
Ages 6–17	43.8	58.1	66.4	41.8	56.1	66.2	57.2	66.6	67.2

*Includes families in which the householder has biological, adoptive, and/or stepchildren.

Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-20: No. 218, Tables 1 and 14; No. 366, Tables 1 and 8; No. 437, Tables 1 and 8; U.S. Bureau of Labor Statistics, Handbook Bulletin 2217, Table 55, and unpublished tabulations.

Box 2. Measuring Poverty

A family's income is classified as being above or below the poverty level on the basis of the poverty index constructed by the Social Security Administration in 1964. The poverty index, which only counts money income, relates a family's income to its minimum consumption needs, or poverty threshold, as calculated by the government.

Families of three or more persons spend an average of about one-third of their income on food, according to a Department of Agriculture Survey of Food Consumption in 1955. Thus the poverty threshold was set at three times the cost of an Economy Food Plan developed by the Department of Agriculture in 1961. For smaller families and individuals, the poverty threshold is set at slightly more than three times the cost of the food plan because smaller households have larger fixed expenses per person.

The poverty income thresholds are updated each year to reflect changes in the Consumer Price Index, or inflation. In 1988, the threshold was $10,987 for an average family of four, and it ranged from $5,478 for a single person to $21,947 for a family of nine or more persons.

years old, the percentage rose from 44 to 66 percent.

The increase in mothers' employment was greatest for children in two-parent families. Although only a minority (36 percent) of married mothers with children under age six worked full time by 1988, the rapid increase in labor force participation of mothers in two-parent families has helped to counterbalance the lack of wage growth of husbands.

Also, the gap in labor force participation between married and single mothers has narrowed. In 1970, 53 percent of single mothers worked outside the home, compared to only 38 percent of married mothers. During the 1980s, the labor force participation rates for married mothers increased, while they remained level for single mothers. By 1988, married mothers with children under 18 were just as likely to be employed as single mothers, and married women with children under age six were more likely to work.

This stagnation in the labor force participation of single mothers reflects the changing composition of this group: a growing proportion of single mothers of young children are themselves young, have never married, and have poor employment prospects. Because single mothers are less likely to be working, they and their children are more likely to be poor.

Average family income in families with children fell, in real terms, during the first half of the 1980s but rebounded in the latter part of the decade. By 1987, median family income for children under age 18 and living in families, stood at $29,892, down slightly from the 1979 level of $30,005 (adjusted to 1987 dollars). Because the average number of children per family declined somewhat during the 1980s, however, the average income available to each child probably did not fall, and may even have increased slightly, during the decade.

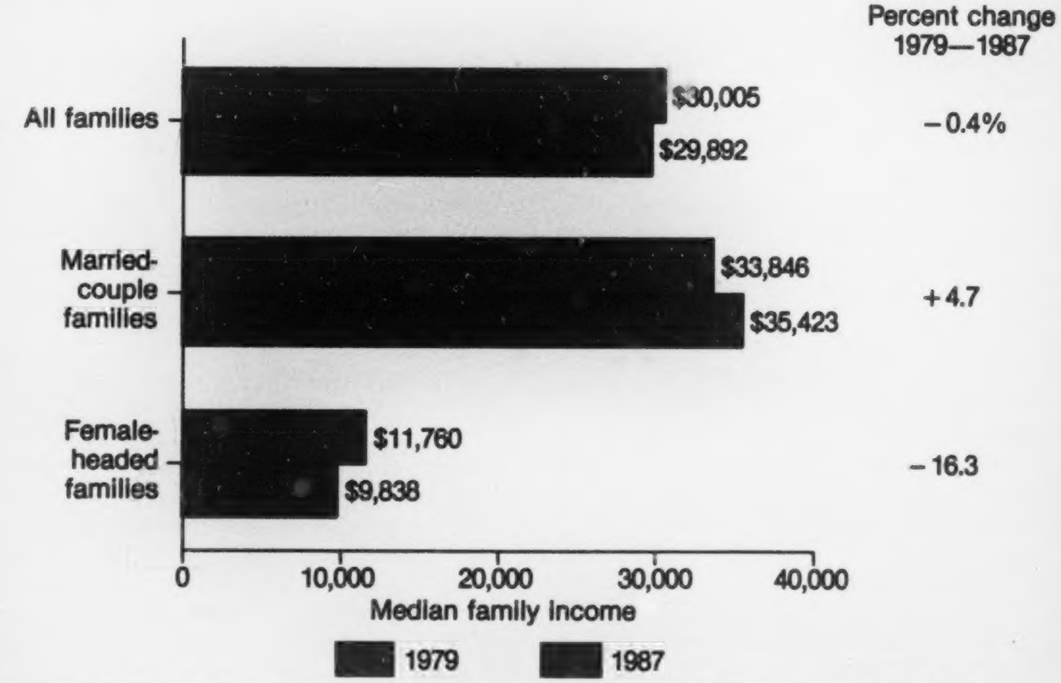
While real income for children in two-parent families increased by 5 percent between 1979 and 1987, income for children in mother-only families decreased by 16 percent (see Figure 6), and the income gap between these two types of families widened. In 1979, the median income in mother-only families was 34 percent of that in two-parent families. In 1987, mother-only families received an average annual income of $9,838, only 28 percent of the $35,423 average for children in two-parent families.

To summarize what has been happening to the economic situation of children, it is useful to look at the three demographic dimensions: age, family structure, and race. Between 1960 and 1979, per capita income was growing just as fast for children as for adults. Among blacks, per capita income growth for children may even have exceeded that for adults. But during the first half of the 1980s, the economic situation of children relative to adults deteriorated. This was partly due to the fact that more children lived in mother-only families, but income for children in many two-parent families fell as well.[23]

The income for adults in childless households has grown more rapidly, in real terms, than it has for parents supporting children. The elderly have fared well because Social Security, pensions, and other non-labor income have experienced a real growth. Children, on the other hand, usually must rely on the earned income of their parents. Much of the positive income effect of demographic adjustments, such as the decline in average family size, occurred prior to 1979. Since then two negative factors for children—the lack of wage growth for their fathers and the continued trend toward living with only one provider, their mother—have exerted a greater impact on the economic well-being of children.

During the 1980s, increased labor force participation of mothers partially offset the slow growth in wages. On average, the income of two-parent families with children rose, or at least did not decline. But, the number of children from two-parent families in poverty

Figure 6. Median Annual Family Income of Families with Children under Age 18, 1979 and 1987



Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-60, Numbers 132 and 162.

increased, suggesting that the additional income mothers brought home improved the living standard for children in middle- and upper-income families but was not enough to keep many lower-income families out of poverty. Consequently, the income disparity between children in more and less affluent families may have worsened during the decade.

The higher poverty rates and the declining average income for children in mother-only families relative to children in two-parent families also points to a growing inequality in the economic circumstances among children. A child who spends all of childhood with two parents may be increasingly better-off than a child who spends either all or part of his childhood in a single-parent family.

Because most children live in two-parent families and the income in these families improved, on average, during the 1980s, the income situation of children did not deteriorate in absolute terms and may have even improved slightly in per capita terms between 1979 and 1988.

But the percentage of children living in two-parent families is dropping; more live with a single parent or other relative, who tend to be less well-off. The majority of black children, and one in four Hispanic children, are currently in families subject to a great deal of economic insecurity, and this must be viewed as a very negative trend. Families, and the economic security they provide to children, are still the major means of transferring opportunity from one generation to the next.

Parental Time with Children

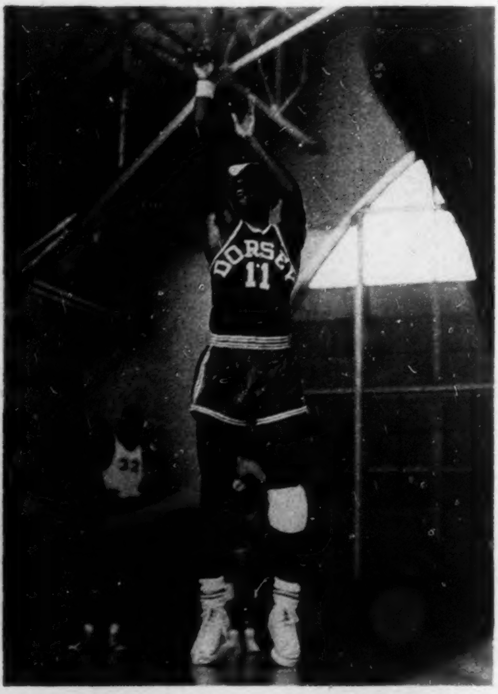
Income is only one dimension of children's well-being. Another is the time, attention, and care that parents and other adults provide. Single-parent families are not only disadvantaged economically relative to two-parent families, they are also "time-poor."[24] In a single-parent household, there is only one person to balance work and child care responsibilities. In two-parent families, parents have more flexibility in juggling home and job activities.

Money income and poverty trends may actually give an overly optimistic picture of change in well-being for children in two-parent families.[25] Hours spent by parents, most often mothers, in child care or housework are not accorded any monetary value in estimates of family income. And the trends in family income do not reflect the increased number of hours of market work required to produce a family's earned income. Because both mothers and fathers work more hours to provide adequately for a family now than two decades ago, they have fewer hours available for the care and nurturing of their children.

Given the increase in children living with only one parent and the rapid increase in labor market participation of married mothers, has the well-being of children changed in ways that money income trends do not capture? Has the quality as well as the quantity of the time parents spend with their children changed? What are the effects of these changes on children?

Mothers spend more time with children than fathers, in part because mothers are less often employed outside the home. Even when employed, they are less likely than fathers to be employed full time. As children grow older, and spend more of their day in school, with friends, or in other activities, the difference between mothers and fathers, and between employed and stay-at-home mothers, in the time spent with their children, becomes less important.

In two-parent families with preschoolers, employed mothers spend less time than full-time homemakers in play and educational activities with their children on weekdays (14 minutes less, on average), less time "having fun" (about an



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Older children spend more hours in school-related activities, leaving less time for parents.

hour less), less time providing physical care (almost 40 minutes less), less time at meals with their children (12 minutes less), and, of course, much less time doing housework while their children are present (two hours less).[26] Interestingly, fathers in dual-earner families with preschool children spend less time during the week "having fun" and "sharing meals" with children than do fathers who are the sole wage earner in the family—probably because they must shoulder more of the household chores. However, fathers in dual-earner families compensate for this by spending considerably more time on the weekend with preschool-age children than do fathers who are the sole bread-winners.

Older children spend much of their day in school, with friends, and in other activities, leaving fewer hours to spend with parents. But here again, mothers who are full-time homemakers spend more time "having fun" with their school-age children, sharing meals, and much more time doing housework in the presence of children than employed mothers. Fathers' time with school-age children is about the same whether or not the mother works outside the home.

Less is known about the time single mothers spend with their children. However, data from a national survey of families and households suggests that, when hours of employment are controlled, single mothers spend as much time as other mothers in child-related activities, such as playing or working with the child, helping with homework, or having private talks. But, primarily because of the absence of a second parent, children in single-parent families spend considerably less time in one-on-one activities with a parent than children in intact families or stepfamilies. Children in stepfamilies receive somewhat less parental time than children in intact families, and children with a single mother receive a little more parental time than children with a single father, but the differences are relatively small.[27]

Do children actually spend less total time "having fun," in "educational and play activities," or "receiving care" depending upon whether they live with a single parent, have two working parents, or a stay-at-home mother and working father? Obviously, the person providing care differs among these children, but does the quantity and quality of care differ from the perspective of the child? The quality of care and the amount of time a child spends with caregivers other than parents is perhaps as important as the amount of time and quality of interaction that a child has with parents.

Mothers in the Labor Force

A great deal of attention has been paid to how maternal employment affects children, but few definitive truths have been discovered.[28] A mother's employment can have positive or negative effects on children, depending upon the family's socioeconomic status, the age of the child, and whether a mother works full or part time.

Psychologist Jay Belsky and associates stirred up controversy when they asserted that maternal employment during the first year of life interferes with a secure mother-child attachment, negatively affecting children's later development. Other research suggests that mothers' employment can negatively influence children's cognitive development, but only when employed full time, rather than part time, during the preschool years.[29]

Effects also seem to differ by family socioeconomic status, and by the sex of the child. A number of studies find small, negative effects on achievement of boys, in particular sons in middle or high socioeconomic status families. Positive effects of maternal employment on children are more often noted for girls and for children in lower socioeconomic status families—perhaps because the additional income provided by the mother's employment is so beneficial to the family that it compensates for the mother's absence. For children with less educated, lower-income parents, a child-care center or babysitter may actually provide higher "quality" care than would their own mothers. In contrast, more affluent mothers tend to have higher verbal skills and more education than most professional child-care providers, and hence, are at least as effective in stimulating children's cognitive ability.[30]

Daughters of employed mothers are more independent and more likely to plan future employment themselves, and both sons and daughters of employed mothers hold more egalitarian sex-role attitudes and view women as more competent than children of nonemployed mothers.[31]

Mothers' employment may influence children's well-being directly through time spent with children and indirectly through a variety of mechanisms. For example, maternal employment increases family income—particularly important for low-income, two-parent families and mother-only families. Also, female labor force participation is related to fertility. While it is not clear whether employment *causes* low fertility or vice versa, employed mothers have fewer children than nonemployed mothers. Children with fewer siblings, at least fewer closely-spaced siblings, tend to have higher academic achievement than those with more siblings.[32] To the extent that employment leads to a smaller family size, maternal employment can indirectly benefit children's economic well-being and cognitive development. Of course, if employment increases the likelihood of marital disruption by enabling women to provide for themselves, maternal employment may negatively affect children's economic well-being. As stated above, families headed by divorced and separated women have lower incomes and are more likely to fall below the poverty level.

Father Absence

For most children, the divorce of their parents means that their father leaves the household, limiting their contact with him, as well as his influence over their lives. Limited contact with fathers is even more characteristic of children whose parents have never married.[33] Not all fathers absent themselves from the daily lives of their children following divorce or separation. As noted earlier, the proportion of children living with their father has increased, although it is still only 3 percent of all children. About 11 percent of children in single-parent families lived with their father rather than their mother in 1988 (see Table 1, page 10).

What does father absence mean for children? For many, it entails absence of financial support. Recent information from a national survey of households and families indicates that just under one-half of noncustodial fathers of children under age 19 pay child support. Among mothers who received support, the average amount paid during the preceding year was only $2,600.[34] According to other estimates, only about three-fifths of mothers with children under age 21 were awarded child support by a court. Among those who were supposed to receive child support in 1985, about one-quarter of fathers paid nothing, one-quarter paid part, and around one-half paid the full amount of funds due. These percentages have not changed much since the late 1970s when this information was first collected.[35]

Fathers, even absent fathers, can help nurture their children through visits, letters, and phone calls. They can remain involved in the lives of their children after they no longer reside with them, but most data show that children's contact with a noncustodial father is relatively infrequent. For example, recently collected data indicate that 29 percent of absent fathers had not visited their children at all during the past year and an additional 12 percent had only seen their children once during the year. About one-quarter saw their children at least weekly. Thirty-seven percent of the fathers had no phone or mail contact with children over a one-year period.[36]

Infrequent contact between fathers and their children also reduces the likelihood that the mothers will receive child support. At least one recent study suggests that this may be the primary way in which father absence hurts children. Sociologist Frank Furstenberg and colleagues found that the amount of paternal contact and a child's reported "closeness" to his or her noncustodial father were unrelated to a variety of measures of social/psychological well-being, measures based on the mother's, teacher's, and child's reports of problem behavior, academic difficulty, delinquency, and distress. However, the lack of parental contact did decrease the likelihood of children receiving any financial support from their father.[37]

Children do experience negative social/psychological effects when they are deprived of contact with their father. The accumulated evidence supports the common assumption that children reared by two biological parents will exhibit higher levels of well-being than children reared in one-parent households.[38]

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After their parents divorce, children's contact with fathers is often infrequent.

In general, the children of divorced or separated parents experience more emotional and behavioral problems, such as increased levels of aggression, heightened anxiety, more dependency, and a tendency to withdraw or be easily distracted.[39] Each of these factors affects how well children get along with peers and teacher's perceptions of them. Research suggests that while actual cognitive differences between children in one-parent and two-parent families from similar socioeconomic levels are quite small, teacher evaluations, such as grades, are lower for children in single-parent families.[40]

Not all the effects of parental separation are unequivocally negative. Children reared in single-parent families are less rigid in defining appropriate male and female roles. Adolescents in single-parent families, who may be forced to assume more responsibility at an earlier age, tend to be more mature, have higher feelings of efficacy, and a stronger internal locus of control than their peers in two-parent families.[41] Of course, they also appear less likely to rely on parental input in their decisions and may be more susceptible to the influence of their peers.[42]

The most severe social/psychological consequences may be heightened around the time of the marital breakup, but then diminish as children adjust to their new family situation. For example, young children appear to have personal adjustment problems or be less sociable at the time of the divorce, but this often disappears with time.[43]

Parental conflict prior to a divorce may be as damaging to a child's self-concept as the divorce itself. Also, among children from similar socioeconomic backgrounds, behavior problems are as frequent for children in intact families with persistent parental conflict as among children who have experienced their parent's marital disruption.[44]

The absence of the father after a marital separation or divorce may be more negative for boys than for girls: personal adjustment problems around the time of divorce are more severe and last longer for boys.[45] Father absence may also lead to lower achievement for boys; boys have more difficulty getting along with peers and functioning in school following divorce than do girls.[46] Other findings suggest that girls' negative reactions to divorce may be delayed until adolescence when they experience more depression than their counterparts in intact families.[47] Girls also may handle their mother's remarriage less well than boys. While many of these gender differences are small, they do suggest that the absence of a same-sex role model makes living in a mother-only family problematic for boys and that absence of a father is a negative factor for adolescent girls coming to terms with their own sexual identity and exploring relationships with the opposite sex.

A growing body of research also points to several longer term consequences of growing up in mother-only families, effects that can not be explained by socioeconomic differences. There is a greater incidence of deviant behaviors (e.g., skipping school, larceny, behavior problems, alcohol and drug use) among adolescents in single- than in two-parent families.[48] Some attribute this, in part, to less parental supervision and control over children in one-parent households.[49]

Children who grow up in mother-only families complete fewer years of school and are more likely to drop out of high school than children in intact families.[50] Children in these families report less parental involvement in helping with homework and planning their high school curriculum than do sons and daughters in two-parent families.[51]

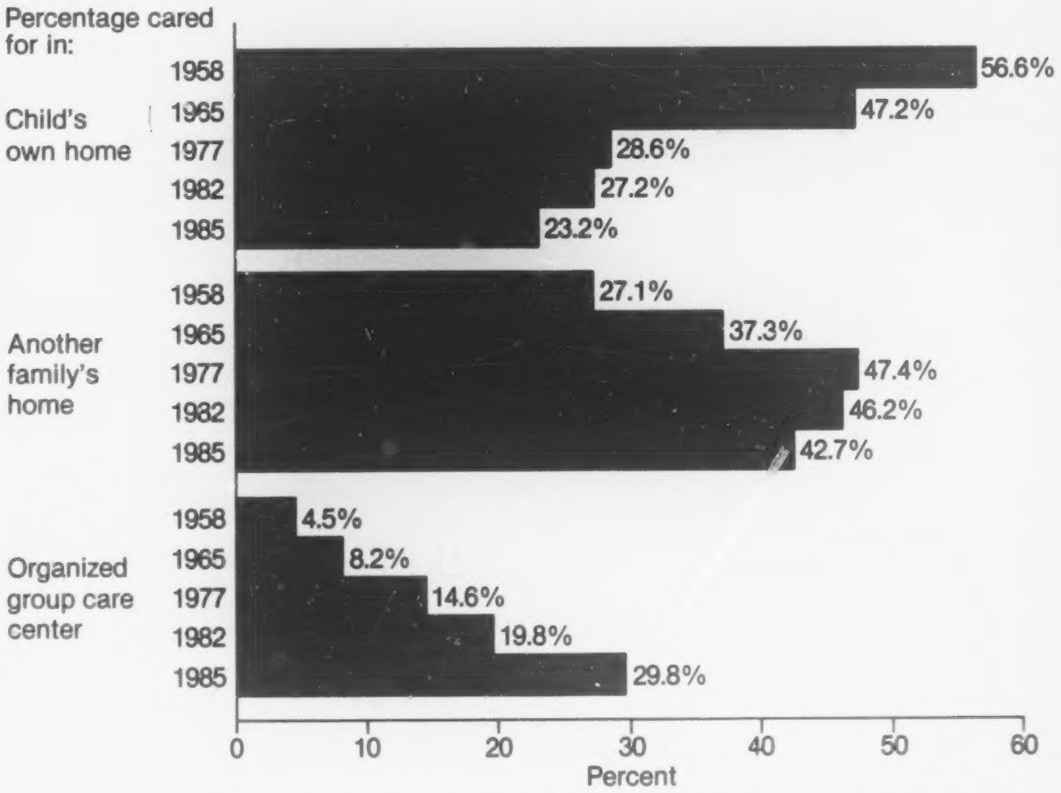
Children from mother-only families subsequently experience more poverty and earn less as young adults. Daughters of single mothers more often receive welfare than daughters from two-parent families.[52] In part, this occurs because they become sexually active at an earlier age, are more likely to marry early, have children early, subsequently divorce, and become single mothers themselves.[53]

Child Care

Given the trends in maternal employment and divorce, care other than mother-care is a fact of life for an increasing proportion of children. How are families, both two-parent and single-parent families, juggling work and child care? And what are the effects, if any, of child care on children?

In June 1958, the U.S. Census Bureau first included a question on the child-care arrangements for the youngest child among mothers with a child under age six who were employed full time. Then, only 18 percent of married mothers with a child under six were in the labor force. The majority (57 percent) of mothers with full-time jobs arranged for their young children to be cared for in their own home, with about three-quarters cared for either by their father or another relative (see Figure 7). A sizable

Figure 7. Child-Care Setting of Youngest Child of Mothers Employed Full Time, 1958–1985



Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-70, No. 9: and Series P-23, No. 117.

minority (27 percent) arranged for care in someone else's home, usually a relative's. Very few children (less than 5 percent) went to organized group care centers.

Between the late 1950s and the late 1980s, the proportion of mothers of children under age six who were in the labor force increased from one-fifth to one-half.[54] As the proportion of young children requiring care while their mother worked increased, the location of care changed dramatically. By the winter of 1984–85, less than one-quarter of children under age five whose mothers were employed full time were cared for in their own home and 30 percent were in child-care centers or nursery or preschool programs during all or most of the time their mother was at work. The most common child-care setting in 1984–85 was another person's home, used by 43 percent of mothers employed full time for their youngest child under age five.

For mothers employed part time, the trends in child-care arrangements have been similar except that in-home care is the most common child-care setting, used by 39 percent of mothers for their youngest child under age five.[55]

Although care of young children has increasingly moved out of the child's own home, often into group situations, family members continue to have a major role in the provision of care, especially care needed "around the edges." Whereas the majority (61 percent) of young children whose mothers are employed full time are cared for by nonrelatives—in the child's home, a family day-care home, or in centers and nursery/preschool settings—the primary child-care providers for the other 39 percent are other family members or relatives (see Table 6, page 28).

For preschool-age children whose mothers work part time and for school-age children, the incidence of care by parents or close relatives is even greater. For example, in families where the mother works part time, almost one-quarter of the children under age five are cared for by their father while their mother works. An additional 16 percent are cared for by a grandparent, usually a grandmother. Some 13 percent of mothers employed part time report that they are able to care for their children while they work. Some women combine paid employment with rearing their own children by caring for other families' children along with their own.

About three-quarters of children in the age range of 5 to 14 are in school during most of the hours that their mother is at work, and hence, for these children, school serves as a primary child-care arrangement.[56] For an important subgroup of these children, before or after school care also is needed to cover all the hours their parents are at work. For about one-quarter of the school-age children, the school day does not coincide with their mothers' work schedule. Parents or other relatives provide child care in 65 percent of these situations; 27 percent of the children are with their father, 12 percent with a grandparent, 13 percent with another relative, and 13 percent are reported to be with their mother while she works.

Parents often must balance each spouse's work schedules, school hours, and availability of relatives for secondary care in order to provide constant care for their children. University of Maryland demographer Harriet Presser has shown that almost 20 percent of male and female workers who have children under age 14 work a fixed non-day shift or a rotating shift. The likelihood of working other than a fixed day shift is even higher among parents of preschool-age children (30 percent of mothers and fathers who are employed full time, 40 percent of mothers employed part time).[57] Although parents often cannot choose their shift, and many things other than child-care needs influence parents' work schedules, fathers become more involved in child care (intentionally or not) the less their work schedule overlaps with their wife's work hours. And, particularly for mothers who are employed part time, it may only "pay" to work if their schedule can be arranged so that children can be cared for by their father or another relative.

Quality of Child Care

How can parents be assured that their child is getting high quality—or at least adequate—child care? Early childhood educators and developmental psychologists have discovered several factors that can enhance the child-care environment of young children of working parents. Much of their research has focused on child-care centers, often university-based centers, and on variables that can be regulated, such as group size, adult/child ratios, physical space, and curriculum. Results suggest, among other things, that small groups (fewer than 15 children) and small center size, in addition to relatively high adult-to-child ratios, foster higher quality.[58]

Research comparing child-care settings (centers versus in-home babysitters versus family day-care homes) suggests that on cognitive measures, independence of their mother, and social reciprocity and interaction with their mother, children in child-care centers score higher than children at home with sitters on all dimensions and higher than children in family day-care homes on cognitive measures and independence, though not necessarily on sociability.[59] Evaluation of programs like Head Start also indicates that high quality child care enhances children's intellectual development, particularly among children in socioeconomic groups at risk of low cognitive achievement.[60] Children in child care compare very favorably with children reared at home on measures of peer interaction, but have more difficulty conforming to adult standards of behavior and maturity.[61]

One recent review of research concluded that "to date, the best predictor of positive outcomes for day-care children is a caregiver who is involved, positive, and stable."[62] The same can be said for children cared for by their mothers, fathers, and other relatives. The presumption is that children with parents and relatives *are* with a stable, nurturing caregiver. Working parents want to ensure a similar environment for their children during the hours they are not with them, but the cost becomes a major factor. In general, high-income families have much greater child-care options available, including mother-care, than low-income families. Much of the recent political debate about child care focuses on the discrepancy in quality care available to low-income (especially single-parent) families and more affluent families. Unstimulating, or worse, negligent care, handicaps these children before they even enter school, and often they can never catch up.

Much remains to be done to assure a good early childhood environment for children from poorer families, but deciding what steps to take and who will pay for them is a volatile political issue. A recent National Academy of Sciences report calls for the federal government to spend an additional $5 to $10 billion per year to expand the Head Start program, increase child-care subsidies to low-income families, and to become involved in the regulation of child-care providers. But, child care and early childhood education must compete with other social issues for shrinking federal dollars.

"Latchkey" Children

Many school-age children care for themselves before or after school while their parents are at work, the so-called "latchkey kids." Table 6 on page 28 shows that 20 percent of school-age children requiring a secondary arrangement in addition to school are caring for themselves. Among those whose mothers' work hours do not overlap much with

Michael Siluk

"Latchkey" children tend to be from white, middle-class, suburban families.

Table 6. Care-Providers for Children with Employed Mothers, 1984–1985

	Children under age 5		Children ages 5–14	
	Mother employed full time	Mother employed part time	Primary arrangement (covering most hours mother is at work)	Secondary arrangement (before and after school)
Percent cared for by:				
Relatives	39.1	62.5	64.9	55.7
Father	10.7	23.8	26.8	16.1
Grandparent	15.6	16.4	12.1	13.2
Other relative	7.8	9.0	13.2	20.6
Mother while working	5.0	13.3	12.8	5.8
Non-relatives	60.9	37.6	24.4	24.3
Individuals	32.5	21.1	12.9	16.7
Group care/school	28.4	16.5	11.4	7.6
Child cares for self	—	—	10.7	20.0
Number of children (thousands)	5,060	3,108	4,534	5,037

Note: Data reflect care arrangement for youngest child under age 15.

Source: U.S. Bureau of the Census, "Who's Minding the Kids? Child Care Arrangements: Winter 1984–85," *Current Population Reports*, Series P-70, No. 9, Tables 1, B, and F.

school hours, 10 percent are reported to be in self-care.

While some have estimated that there are as many as 15 million "latchkey" children in the United States, the most accurate guess is probably from a 1984 Census Bureau Survey on before- and after-school care of children 5 to 13 years old, which found that about 2.1 million children cared for themselves after school. An additional 0.3 million cared for themselves or were in the care of a sibling under age 14 at other times, such as before school or at night.

Dispelling the stereotype of a latchkey child spending many long, lonely hours at home, most of these children were alone for less than one hour before school and less than two hours after school. Parents who worked away from home for longer hours tended to arrange adult supervision for their children.[63]

The incidence of self-care was relatively low for younger children but increased with the age of the child. The highest incidence was for children 11 to 13 years old of mothers employed full time; about one-quarter of these children spent some time alone or with no one over age 14 present in the household.

Race, family income, household composition, and residential neighborhood were also related to the incidence of self-care. White, middle-class children who lived in suburban neighborhoods with no older siblings, grandparents, or other adult relatives other than parents at home were more likely than children in other socioeconomic groups to spend some hours at home without adult supervision.

Self-care apparently is used by parents who feel relatively sure that their children are old enough to handle being alone, feel secure that their children will be safe at home alone, and can assure that their children will only be on their own for relatively short periods of time. What is not known and is perhaps more important, is how children spend time alone after or before school, how actively parents try to structure hours of self-care (for example, by requiring household chores or homework to be completed during the time alone), and how well parents are able to monitor (by telephone or asking neighbors to check on their children) the time school-age children spend on their own.

Despite the somewhat optimistic portrait of self-care that emerges from the above survey data, teachers perceive this lack of supervision after school to be a major reason children have difficulty. In a 1987 "Metropolitan Life Survey of the American Teacher," 51 percent reported that the "latchkey" phenomenon was a "major cause" of students' difficulties in school.

Francis Wardle

About 60 percent of children whose mothers work full time are cared for by non-relatives.

Family Role in Child Care

Despite the fact that the majority of mothers of children of any age are employed and must arrange alternate care for their children, when mothers are asked about the ideal care of young children, care by the mother remains the choice of the overwhelming majority of working mothers as well as full-time homemakers. If mother-care is not available, then the majority say father-care is the best substitute. Other relatives, grandmothers in particular, are next in order of preference, at least for children under the age of three.[64]

The preference for parental or familial care of children appears to be out of step with a changed social reality. Today's mothers are more often employed outside the home and fathers more frequently do not live with their children. Yet a closer look at the data in Table 6 reveals that the primary care-provider for a majority of preschool and school-age children is their mother, father, or another relative, upholding the ideal of strong family involvement in the care of children.

Although the majority of mothers of children under age six were working in 1988, at any point during the year, 47 percent of children had mothers who did not work outside the home. Presumably, most of these children were cared for by their mothers. As many as 25 percent of all children under six were cared for by their mother while she worked, or by their father or other relatives while their mother was at work. Combining the 47 percent of children in mother-care with the approximately 25 percent primarily in the care of family members or relatives while the mother was at work, we discover that a majority of preschool-age children (perhaps as many as 70 to 75 percent) were still primarily cared for by their mother, father, or other relatives in 1988.

Similarly, at any given point during 1988, the mothers of one-third of school-age children were not in the labor force, and presumably were free to care for school-age children before and after school. Other estimates show that almost one-third of school-age children were not in any before- or after-school child-care setting, presumably because their parents, usually their mothers, managed their work schedules to coincide with the school day. Hence, around 35 percent of school-age children under age 15 spent time in child care in addition to the time they spent in school. But given the high incidence of parental or relative care for these children, perhaps as many as 20 percent of school-age children were cared for by their mother while she worked, their father, or other relatives. Only around 15 percent of children were in the care of non-relatives, in before- and after-school programs, or cared for themselves.

Once children enter school, they require fewer hours of additional child care, at least during the school year, and are often cared for by their own mother, father, or relatives. Ironically, school-age children are more likely to be cared for by their parents than are preschoolers, yet parental care is considered more crucial for the cognitive and emotional development of younger children. Also, parents express a stronger desire for younger children to be cared for by their mothers. Estimates of the children in child care at any given point underestimate the total proportion who spend part of their childhood cared for by a non-relative (for example, in preschool, or during school vacations), but they do suggest that care of children in the U.S. remains very much a "family affair."

Educational Performance

After age five or six children spend much of their day in school. The school environment and how it affects children, educationally, socially, and emotionally, are critical aspects of their well-being. Concern about the quality of education children are receiving in the public schools continues to command the attention of local school boards and state legislatures. Many parents also spend considerable time and energy monitoring their children's progress in school, helping with homework, and interacting with teachers and other school officials. Most parents want their children to do well in school, finish high school, perhaps go on to college, and move successfully into the adult world of work.

Preschool Enrollment

The increase in nursery or preschool attendance is the major change in U.S. school enrollment during the past two decades. In the case of three- and four-year olds, the percentage enrolled in nursery schools, pre-kindergarten or kindergarten programs, or child-care centers with an "educational" curriculum increased from 11 percent in 1965 to 38 percent in 1988.[65]

U.S. Dept. of Health and Human Services

Many parents spend considerable time and energy helping their children with school work.

This change has been motivated, in part, by the increased demand for child care as more mothers of young children have joined the labor force. However, enrollment in nursery and preschool programs has been nearly as high for children of nonemployed mothers as for mothers employed outside the home.[66] In October 1988, 42 percent of the three- and four-year old children of employed mothers attended nursery school or kindergarten, as did more than one-third of the children whose mother did not work outside the home (see Table 7).

Nursery school attendance is more common in the Northeast than other U.S. regions, and among children who live outside the central cities of metropolitan areas. The higher incidence of preprimary enrollment among suburban children, in part, reflects the fact that families living in these areas tend to be more affluent than families living in central cities or nonmetropolitan areas. The cost of preschool may be prohibitive for low-income parents. Except for programs such as Head Start and pre-kindergarten programs offered in some public schools, nursery school programs can be relatively expensive.

Well-educated mothers, who probably are more affluent, are more likely than less-educated mothers to enroll their children in a preschool program. Sixty percent of young children whose mother was a college graduate (or had an advanced degree) attended nursery school in the fall of 1988, while only 22 percent of those whose mother had not completed high school were enrolled.

Thirty years ago, children's first experience with a school setting came at around age five when they entered kindergarten. Today, a significant minority of American three- and four-year olds, the majority in affluent families with well-educated parents, have learned many of the behavioral expectations of teachers and classrooms prior to entry into kindergarten. Kindergarten curriculums have become somewhat more "academic," partially in response to this trend in pre-kindergarten enrollment. Because children from lower socioeconomic backgrounds often enter kindergarten with no prior school experience, they start their school career at a great disadvantage. The recognition that this disparity in preschool attendance will only widen the performance gap between lower- and higher-income groups has increased the pressure on many public school systems to provide pre-kindergarten programs for all chil-

Table 7. Preschool Enrollment of Three- and Four-Year Olds by Selected Characteristics, 1988

	Total children (thousands)	Percent enrolled		
		Total	Nursery school	Kindergarten
Total	7,318	38.2	32.5	5.7
Residence				
Central cities	2,307	34.0	28.3	5.7
Suburbs	3,405	43.1	36.9	6.2
Nonmetropolitan	1,606	33.8	29.1	4.7
Family income				
Less than $15,000	2,296	27.7	21.2	4.8
$15,000 to $29,000	1,930	30.4	25.5	6.5
$30,000 to $49,000	1,772	47.4	41.5	4.9
$50,000 and over	1,064	56.2	56.2	5.9
Children living with mother				
Total	6,939	38.4	32.8	5.6
Mother in labor force	3,936	41.1	34.9	6.3
Employed full time	2,395	41.3	33.5	7.7
Employed part time	1,268	43.0	39.2	3.8
Unemployed	272	31.6	26.5	5.1
Mother not in labor force	3,003	34.8	30.1	4.7
Mother's education				
Less than high school	1,334	21.7	16.2	5.5
High school graduate	2,909	33.8	28.6	5.2
Some college	1,394	43.8	38.8	5.0
College graduate	1,301	60.0	52.9	7.1

Source: U.S. Bureau of the Census. "School Enrollment—Social and Economic Characteristics of Students: October 1988," *Current Population Reports*, Series P-20, forthcoming, Table 4.

dren. In New York City, for example, preschool programs for four-year olds are being introduced into many public elementary schools.

School Enrollment

School attendance is compulsory for children between the ages of 7 and 15, and enrollment in school has been virtually universal for this age group since at least 1960. For five- and six-year olds, school attendance increased from about 80 percent in 1960 to 95 percent in the mid-1970s, reflecting the general move toward school attendance at earlier ages and almost universal kindergarten attendance.[67]

One important change in school enrollment has been an increase in the percentage of 16- and 17-year olds who remain enrolled in school. In 1960, 85 percent of white and 76 percent of black youths of this age were enrolled in school. In the latter 1980s, these percentages stood at about 93 percent. For blacks, most of this increase took place between 1960 and 1975 with only small increases in the last decade and a half. For whites, the percentage enrolled at this age increased in the 1960s, was stable or dipped slightly in the 1970s, and may have increased slightly in the 1980s.[68]

The rate of high school graduation has remained stable for whites since the mid-1970s. About three-quarters of white youth complete high school by age 18 or 19, and many others finish at slightly older ages. In 1986, about 85 percent of 20- to 24-year-old whites were high school graduates. For blacks, the rate of high school completion has risen in recent years. By 1986, about 65 percent of 18- and 19-year olds, and 81 percent of 20- to 24-year olds were high school graduates. More black than white youth were still in high school at age 18 or 19, but the high school completion rate of 20- to 24-year olds was very similar for the two racial groups. Black students are more likely today than in the past to remain in school until they graduate. Among Hispanics, however, only about 55 percent of 18- and 19-year olds and 62 percent of 20- to 24-year olds had completed high school in 1986. The trend for Hispanics has been uneven, especially compared to the improvement among blacks.[69] The continued immigration of Hispanics, many of whom are not fluent in English when they arrive, has been a contributing factor to the lack of educational progress among Hispanic students.

Academic Performance

The academic competence of students as they leave high school is at least as important as the proportion of high school students who graduate. Considerable attention has been given during the past two decades to declining levels of achievement, at least among the brightest school children, and the comparative disadvantage of U.S. school children with children in other advanced industrial nations in math and science achievement.

The most often cited measures of school achievement among elementary and secondary school-age children come from the congressionally mandated National Assessment of Educational Progress (NAEP), which has tested student's reading, mathematics, and science achievement at selected intervals in the 1970s and 1980s. In recent years, the NAEP has assessed more than just basic skills, adding sections on children's computer literacy and high school students' knowledge of history, geography, and literature. And, for the first time in 1988, an International Assessment of Educational Progress was conducted in which the mathematics and science proficiency of U.S. 13-year olds was compared with that of children from Canada, Ireland, Korea, the United Kingdom, and Spain.[70]

Results from the NAEP suggest that, although basic reading, writing, and mathematics skills may have increased slightly, or at least remained level, students have not improved their ability to garner more than a superficial understanding of what they read or to handle analytic problem-solving in mathematics. Many students, particularly minority students, have great difficulty with reading and mathematics tasks that require complex reasoning.[71] In addition, U.S. school children scored lower than children from any of the other countries tested in the area of mathematics proficiency in 1988.

Average science scores increased slightly in the 1980s, after declining in the 1970s, particularly among 17-year olds. The performance of U.S. students appears inadequate, however, when we consider the low percentage who score extremely well on science proficiency tests, or when we compare U.S. school children with those in other countries. U.S. and Irish school children were in the lowest scoring group of science proficiency scores. The science (as well as mathematics) scores of Korean students were superior to those of school children in each of the other countries included in the international assessment, and far superior to those of children in the United States.

The most often cited statistic on the deterioration of the academic achievement of U.S. students was the decline in average scores on college entrance examinations, particularly the Scholastic Aptitude Test (SAT), that occurred between 1963 and 1980. Research indicates that a sizable portion of the decline in the 1960s resulted from a change in the composition of those taking the test, as college attendance rose among students of lower ability. However, this does not explain the continued decline during the 1970s. Some of the decline may have resulted from changes in high school curricula that allowed students to take more electives and a general movement away from traditional academic coursework.[72] Partially in response to this, there has been a "back to basics" movement in the schools during the 1980s with an increase in required courses for high school graduation in many states.[73]

The downward trend in SAT scores seems to have ended, with a small improvement in average verbal scores between 1981 and 1985 and in math scores between 1981 and 1987. However, in 1988, the average verbal SAT score stood at 428, down 50 points from the 478 level of 1963. Similarly, the average mathematics score was 476, 26 points lower than in 1963.[74]

The decline in SAT scores reflects trends among relatively gifted students—those who have some hope of acceptance to college—although the selectivity of this group varies geographically and has shifted over time.[75] But while average scores may be improving, the percentage of students with extremely high scores (over 700) has declined over time, just as a smaller percentage of younger students are able to achieve high levels of competency on the NAEP. These trends raise questions about how well America's "best and brightest" are doing, and concern that while there has been improvement at the lower end of the achievement scale, there has been little or no improvement at the top.

On the positive side, however, achievement scores of minorities have improved, although a wide gap remains between minority and nonminority students. Average levels of reading, math, and science competency of elementary and high school students have not dropped during the past two decades. The decline in SAT scores appears to have ended. And the likelihood of high school graduation has improved, at least for black students.

There are also trends in the schools themselves that bode well for the future. Per-pupil expenditures continue to increase and student/teacher ratios continue to decline, although these changes were underway throughout the period of declining SAT scores. The annual salaries of teachers, after stagnating and then declining during the 1970s, rose in real terms during the 1980s. In 1988, teacher salaries (in real dollars) were at the highest level they had been in 30 years.[76] The demand for teachers, in particular secondary school teachers, will also increase in the future. Increased demand combined with better salaries could encourage more talented individuals to enter the profession. However, teaching will have to compete with other, better-paying professions for a smaller pool of potential workers as the United States experiences a shortage of skilled workers in the 1990s. It has been argued that the single most important school-related predictor of children's academic performance is the quality of the teachers they have.[77]

Children's academic performance is also largely conditioned by family background and home environment. While some trends, such as the increase in family disruption, would appear negative, the continued improvement in parental education and the decline in average family size both augur well for the future. Although there is some disagreement about the magnitude of the effect, research has shown that the fewer the number of siblings, the greater a child's verbal ability and the more years of school he or she eventually completes.[78] Demographer Judith Blake has shown that, although U.S. fertility has been low for some time, small families, in which children grow up with only one or two siblings, are a relatively recent phenomenon. She argues that, as more children raised in these small families go through school, average academic performance will improve.[79]

Other Aspects of Well-Being

Children's Health

In many ways, the physical health of American children has never been better. Although the U.S. infant mortality rate remains higher than in most other industrialized countries, both infant and child mortality rates have dropped significantly since 1960 (see Table 8). When parents are asked to assess the overall health of their children, the vast majority rate their children's physical health as very good or excellent.[80] Many serious illnesses, such as diphtheria and polio, have been greatly reduced through widespread inoculation campaigns. Most children may not enter school unless they have been vaccinated against several major childhood diseases.

Despite the improvements in child

Table 8. Infant Mortality Rates and Death Rates for Children under Age 15, for Blacks and Whites, 1960–1987

	Infant mortality rate (Deaths per 1,000 births)			Death rate (deaths per 100,000)					
				Ages 1–4			Ages 5–14		
	Total	Blacks	Whites	Total	Blacks	Whites	Total	Blacks	Whites
1960	26.0	44.3	22.9	109	191	95	47	65	44
1970	20.0	32.6	17.8	85	140	75	41	56	39
1980	12.6	21.4	11.0	64	98	58	31	39	29
1987	10.1	17.9	8.6	52	68	49	26	36	24

Source: National Center for Health Statistics, "Advance Report of Final Mortality Statistics, 1987," *Monthly Vital Statistics Report*, Vol. 38, No. 5, Tables 2 and 3.

health, the health status of low-income, minority children, especially those living in central cities or rural areas is below the average. Black infants are twice as likely to die or to be of low birth weight as are white infants. Low birth weight (less than 2,500 grams or 5.5 pounds at birth) is associated with serious, and costly, health problems for children. At older ages, too, black children have higher death rates than whites, although the gap has narrowed considerably since 1960 (see Table 8).

Inadequate medical care for pregnant women and children, especially blacks and teenage mothers, is associated with the lower health status and higher mortality of minority children. Some experts estimate that as many as 1 in 10 infant deaths could be prevented by medical intervention. But many poor families, especially the working poor who often are not enrolled in welfare programs, do not have easy access to regular medical care. According to the Census Bureau, some 37 million Americans had no health insurance in 1986; 24 million of these were from families with an employed adult.

Although the percentage of adolescents using drugs and alcohol appears to have declined since the early 1980s, occasional drug and alcohol use among teenagers remains widespread. More than one-half of all students will try an illicit substance by the time they are high school seniors, according to recent estimates.

Emotional and Psychological Health

Some researchers see evidence that the emotional and psychological well-being of American children is deteriorating, citing rising adolescent suicide rates and a growing proportion of children who are said to have had seriously disturbing experiences or need special educational assistance from the schools because of chronic emotional problems. However, the majority of children do not report that they are depressed or unhappy with their lives. In fact, most children are quite happy with their family lives despite the increase in family disruption. Also, the subjective measures of happiness for children and youth have not changed markedly during the past decade.[81]

Children and the Future

What is the value of children? For society, it is obvious. They represent the next generation of workers and embody each nation's hope for a continued, perhaps improved, existence. For parents, they offer fulfillment, the opportunity to care for and help mold the personality of another human being, but they also demand a great deal of time, money, attention, and self-sacrifice.

Whether the cost of children will continue to be outweighed by their benefit to individuals and families can be debated. The emphasis on individual fulfillment in the United States may come in conflict with the very essence of raising children: the need to place the interests of others first.

Economic factors, such as the stagnation in male wages since the mid-1970s, the high price of housing, the difficulty of finding good quality, affordable child care, and the increased costs of a college education have profoundly altered the labor force, marriage, and childbearing decisions of individuals. Couples are waiting longer to marry and have children, having fewer children, and more often divorcing before those children reach adulthood. Mothers as well as fathers find it increasingly necessary to be in the labor force to assure an adequate standard of living for their children.

Some of the indicators of children's well-being during the past two decades are sobering, but others provide an optimistic picture and offer hopeful signs for the future of U.S. children. First, the baby-boom generation is making up for some of the childbearing foregone earlier in their lives. Predictions of childlessness and large scale abandonment of family life for this generation, a generation supposedly obsessed with individual fulfillment and achievement, will not be realized. Women and men today may be moving more slowly toward meeting their childbearing goals than their parents and, either by choice or necessity, they may be combining family and work responsibilities in ways not envisioned 30 years ago, but they are not all giving up childrearing.

Nor are most children being shortchanged in terms of what money can buy, although there is some cause for concern in that inequality in the material well-being of children appears to be increasing. Whether children are being neglected in terms of the time parents spend with them is harder to assess. Despite the increase in maternal employment and father absence, both of which negatively affect the amount of time children spend with parents, there is evidence of a continued, almost surprisingly high level of family involvement in the caring of young children and of school-age children when they are not in school.

The educational attainment of blacks appears to have kept pace, even improved slightly, when compared with whites, despite the widening racial differences in family lives of black and white children. However, most of the improvement in academic skills of American children has been among the low-achieving students. There has been little real gain among the best and brightest students, leaving the United States at a disadvantage internationally.

On other aspects of children's well-being the evidence is mixed: their physical health is probably better than ever but their psychological well-being may not be. Still, most children report healthy, happy lives and satisfaction with their family. This, as much as anything, portends well for the future.

Today's children are being shaped differently from yesterday's children. They will have spent considerably more time in group settings, cared for by individuals other than their parents. They will have more frequently observed that mothers, as well as fathers, leave for work each day. More of them will see their father, and in some cases their mother, move out of their household and will be forced to deal with the trauma this entails. They will have fewer siblings with whom to compete but also from whom to learn and share.

Will children today be better or worse off than their parents? Part of the answer rests on the commitment by the public and by parents to ensure the well-being of the children. Children traditionally embody their parents' hope for a better life, and their country's wish for a more resourceful and productive citizenry. They also reflect the strength and values of the society that produces them; their well-being exemplifies the country's well-being; their future is the country's future. ☐

Judy Burr

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Discussion Points

1. Compare and contrast the parenting experiences of baby boomers to those of their own parents.
2. Compare the proportion of children in the population to the proportion of elderly for the past, present, and future. How do changes affect distribution of resources and services (e.g. schools, social services, medical centers, etc.)?
3. Outline the changes that have taken place in children's home environments since 1960 (living arrangements, parent's labor force participation).
4. What factors contribute to lower family incomes in never-married households? Describe the differences in income among never-married, divorced, separated, and widowed mother-only families.
5. What factors affect the length of time that a child might spend in poverty?
6. Discuss the impact that changes in the number of children in the family, the educational attainment of the parents, and the labor force status of the mother have had on the well-being of children.
7. Explain the causes for the change in the proportion of children living in poverty between 1970 and today.
8. Compare and contrast the child-care arrangements for children in families where the mother is employed full time to those in families where the mother holds a part-time job.
9. Discuss the well-being of children in relation to the elderly, their parents' generation, and children in other countries (both developed and less developed).
10. Describe some of the policies that have been suggested concerning the well-being of children. What are their merits and drawbacks? What kind of policies would you endorse?

Prepared by Kimberly A. Crews

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R8757-2.48F 8/90

POPULATION BULLETIN
Vol. 45, No. 2, July 1990

Metropolitan America: Beyond the Transition

By William H. Frey

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Abstract—Americans have always gravitated toward cities, and for most of this century, urban growth has continued at a fast pace. During the 1970s, however, nonmetropolitan areas grew at the expense of many large metropolitan areas, especially those in the industrial centers of the Northeast and Midwest. New patterns of population distribution appeared to be emerging. This *Bulletin* analyzes the trends of the 1970s, the so-called "transition decade," the shifting patterns of the 1980s, and likely prospects for future growth in metropolitan areas. The "rural rennaisance" resulted from a combination of forces, including improved infrastructure in nonmetropolitan areas, growing demand for retirement and recreation spots, the entrance of the large baby-boom cohort into the labor force, and the economic situation both at home and abroad. Some of these same forces have shifted settlement patterns in the 1980s, helping create "World Cities," like New York and San Francisco, and regional "Command and Control Centers" such as Atlanta and Minneapolis-St. Paul, that will continue to gain in both population and influence. Yet nonmetropolitan areas still attract retirees and other former urbanites.

The distribution of minority groups among metropolitan populations is also undergoing significant change. The heavy immigration of Hispanics and Asians in the 1980s has increased the proportion of these groups, particularly in metropolitan areas in the South and West. More black Americans are moving to suburbs formerly dominated by whites. Yet large pockets of poverty—of both blacks and whites—remain in both suburban and central city areas.

Editor: Bryant Robey
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POPULATION BULLETIN
Vol. 45, No. 2, July 1990

N.Y. Convention & Visitors Bureau

Metropolitan America: Beyond the Transition

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In preparing this Bulletin, *the author has benefited from the suggestions of Alden Speare, Jr. of Brown University, Richard L. Forstall of the U.S. Bureau of the Census, and Glenn V. Fuguitt of the University of Wisconsin-Madison. Useful data and background materials were provided by the U.S. Bureau of the Census, the Immigration and Naturalization Service, and the Bureau of Labor Statistics. At the University of Michigan, computer programming was performed by Cathy Sun and research assistance was rendered by Anne Croisier. The author also wishes to acknowledge the expert editorial assistance provided by Mary Kent and Bryant Robey of PRB.*

The concentration of America's population in large, expanding cities has been among the most powerful and long-standing of this nation's demographic trends. Throughout most of our history, cities have attracted larger populations than the countryside. The reasons are many. Since the early days of the nation, immigrants clustered in the central cities of large ports of entry. The decline of agriculture in favor of manufacturing and services—initiated by the Industrial Revolution—created a stream of migrants who left the countryside for urban areas. Big cities offered employment and the hope of a better life. Suburbs grew up around the cities to provide housing for the expanding work force and its families. By the middle of this century, the growth of metropolitan areas—central cities and their suburbs—was in full force.

Then during the 1970s, this long-standing trend toward population concentration suddenly appeared to reverse itself. Nonmetropolitan areas across much of the country started growing faster than metropolitan areas. So strong was this new trend that it gave rise to the term "rural renaissance." Several of the nation's largest metropolises actually lost population, while some parts of the rural South and West gained rapidly.

These developments represented a significant shift in historic population redistribution patterns. The 1970s were described by some observers as a "transition decade."[1] The fact that similar reversals were taking place in other developed nations lent credence to the view that fundamental changes were occurring in America.[2]

In the 1980s, nonmetropolitan America did not fare as well as in the 1970s, though population growth appeared to be reviving in some nonmetropolitan areas toward the end of the decade. While the 1980s also treated many small metropolitan areas in manufacturing regions poorly, several large northern metropolitan areas made impressive comebacks, and their central cities stemmed the severe population declines of the 1970s. Many large metropolitan areas in the nation's heartland have yet to recover from the economic declines of the 1970s; other areas, particularly on the two coasts, have managed to transform their economies.

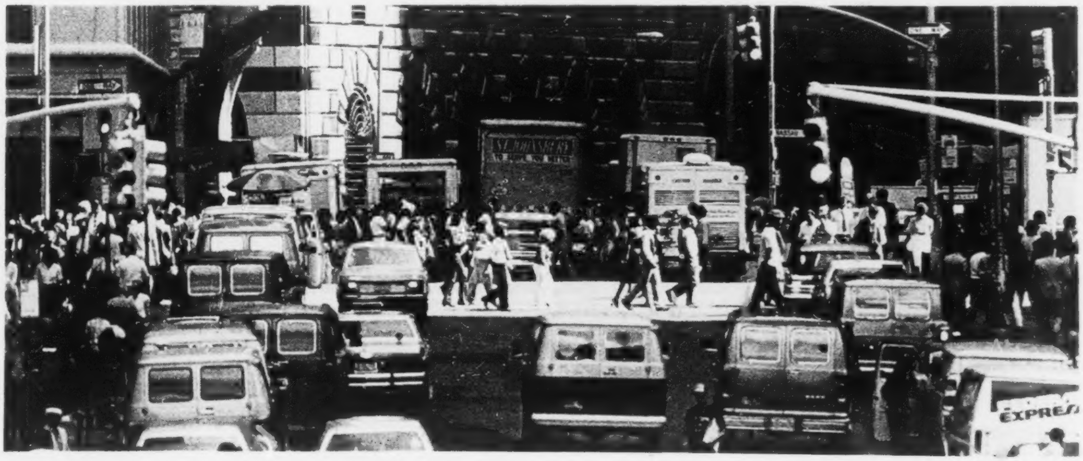
Asian immigrants contributed heavily to population growth in some large metropolitan areas in the 1980s, including Los Angeles and San Francisco. Mexican immigration also spurred growth in these areas and along our southern border. America's large and increasingly mobile elderly population has brought gains to many fast-growing metropolitan areas in Florida and other retirement magnets. Other metropolitan areas in the South and West are building on regional reputations to become national "Command and Control Centers."

New regional alliances are emerging out of current economic and demographic trends. Much heralded tensions between Snowbelt and Sunbelt, and between metropolitan and nonmetropolitan areas that arose in the 1970s are being replaced by new strains.

As the 1990s begin, population growth continues to be most robust along the nation's East and West Coasts. Their amenities and attractiveness to immigrants combine with national and international economic trends which favor areas that provide advanced services, "World Cities," and "Defense Perimeters."[3] Some of this growth has been at the expense of interior regions that once specialized in heavy industry, petroleum, and farming, but whose decline has challenged them to restructure their economies or face population losses.

This *Bulletin* examines recent population distribution trends, evaluating the experience of the 1980s against the stunning metropolitan and regional patterns of the previous decade. In doing so, it answers such questions as whether "rural renaissance" was only a short-term trend, whether northern metropolises will grow or decline in the future, and whether the South and West will continue to boom. The *Bulletin* also looks at such important trends as gentrification and the emergence of urban poverty zones.

Population redistribution affects many aspects of American life—political representation, taxing and spending, corporate investment, and even the fate of the nation itself. As metropolitan America moves "beyond the transition," what does the future hold in store?



U.S. Dept. of Housing and Urban Development

New York, one of only six U.S. metropolitan areas with 1 million or more residents in 1910, is still the nation's largest, with 18.1 million residents in 1988.

Table 1. Number and Population of U.S. Metropolitan Areas, 1910–1988

	1910	1930	1950	1970	1988
Number of metropolitan areas					
All areas	71	115	169	243	283
Areas with 1 million or more residents	6	10	14	33	37
Metropolitan area populations (millions)					
All areas	34.5	61.0	84.8	139.4	189.4
Areas with 1 million or more residents	16.5	31.7	44.9	80.6	120.4
Percent of U.S. population in metropolitan areas					
All areas	37.5	49.7	56.0	68.6	77.0
Areas with 1 million or more residents	17.5	25.8	29.6	39.6	49.0
Total U.S. population (millions)	92.0	122.8	151.3	203.2	245.8

Source: Bogue, Donald, *Population Growth in Standard Metropolitan Areas, 1900–1950* (Washington, D.C.: Housing and Home Finance Agency, 1953); U.S. Bureau of the Census, 1950 and 1970 Censuses of Population, and 1988 population estimates compiled by the Population Division.

The Fortunes of the Metropolis

The nation's largest cities and the territory around them, particularly on the East Coast, have grown continuously since the nation's early years. Much of the metropolitan growth in our first century reflected the steady flows of European immigrants to America. Toward the end of the 1800s, as America turned from farming to industry as the engine of its economic growth, large streams of rural migrants began to flow into cities throughout the country.

Metropolitan growth has remained strong throughout most of the 20th century (see Table 1). Between 1910 and 1988, while the national population grew by 167 percent, the metropolitan population grew by 449 percent, and metropolitan areas with at least 1 million residents grew by 630 percent. In contrast, the population in nonmetropolitan territory hovered within a narrow range (between 56 and 67 million) throughout this 78-year period.

The growth of areas with populations of 1 million or more has been an important aspect of metropolitan development. In 1910, only 6 areas, all in the Northeast or eastern Midwest (New York, Philadelphia, Boston, Pittsburgh, Chicago, and St. Louis) had 1 million or more residents. By 1950, the number had reached 14, with all but 2 (Los Angeles and San Francisco) in the Northeast or Midwest. Since then, the number has almost tripled. This rapid growth is the result not only of population increase itself but also the "graduation" of smaller metropolitan areas into the million-plus category.

The very concept of the *metropolitan area* is the result of historic population trends. Standard metropolitan area definitions were used in the 1950 Census to reflect the steady and massive concentration of population in cities and their suburbs.[4] Beginning with the 1960 Census, these areas were labeled "Standard Metropolitan Statistical Areas" (SMSAs). Later, the expansion of some large metropolitan areas led to the concept of the "Consolidated Metropolitan Statistical Area" (CMSA), established by the federal government in 1983. At the same time, the government dropped the term "SMSA" in favor of "MSA," for

Box 1. Defining the Metropolitan Area

The most common type of metropolitan area consists of one or more central cities with a combined population exceeding 50,000, along with surrounding counties (or towns in New England) that are economically and socially linked to the center. This concept reflects, and is in part established by, commuting patterns from suburbs into an urban core.

The nation's total metropolitan population consists of the sum of all residents of the counties within each individual metropolitan area. The nonmetropolitan population consists of all residents of the remaining counties and towns.

The metropolitan area definitions used in this *Bulletin* are, for the most part, consistent with those issued by the Office of Management and Budget (OMB) as of June 30, 1989, which evolved from the original definitions established for the 1950 Census. The current definition recognizes two different types of metropolitan areas: (1) Metropolitan Statistical Areas (MSAs), which represent individual metropolitan area units; and (2) Consolidated Metropolitan Statistical Areas (CMSAs), which represent large metropolitan complexes within which component areas have been defined. The 283 metropolitan areas examined in this *Bulletin* comprise 263 MSAs and 20 CMSAs.

MSA Definition: An area can qualify as an MSA in one of two ways: (1) if there exists a central city of at least 50,000 population, or (2) if the Census Bureau Urbanized Area surrounding the central city has a population of at least 50,000 and a total metropolitan population of at least 100,000 (or 75,000 in New England). Urbanized Areas are defined by the Census Bureau to include both the central city and its closely settled surrounding territory, both incorporated and unincorporated, determined on the basis of population and population density criteria. In addition to the county containing the main city, an MSA also includes additional counties that have strong economic and social ties to the central county, determined chiefly by the extent of the Urbanized Area's territory and by census data on commuting to work. New England MSAs are defined in terms of a core area and related town (rather than county) components. An MSA may contain more than one central city of at least 50,000 population and may cross state lines.

Alternative county-based metropolitan areas are defined for the six New England states. These New England County Metropolitan Areas (NECMAs) are sometimes substituted for MSAs.

CMSA and PMSA Definition: A CMSA is a large metropolitan complex, always with at least 1 million in population, within which component areas, known as Primary Metropolitan Statistical Areas have been defined. A county or group of counties may qualify as a PMSA if: (1) local opinion supports separate recognition for a county or group of counties which demonstrate relative independence within the metropolitan complex; or (2) it had previously been recognized as a metropolitan area on January 1, 1980 and local opinion supports its continued recognition as such.

For further information about metropolitan definitions see Donald E. Starsinic and Richard Forstall, "Patterns of Metropolitan Area and County Population Growth: 1980 to 1987," *Current Population Reports,* Series P-25, No. 1039. The January 3, 1980, *Federal Register* contains a detailed account of the current metropolitan criteria.

"Metropolitan Statistical Area" to denote the more typical metropolitan area unit (see Box 1 for current definitions of metropolitan area types).

The 37 metropolitan areas with more than 1 million residents in 1988 consist of 20 CMSAs and 17 MSAs. Approximately half of the national population lives in these major metropolitan areas, and almost a quarter lives in the country's 7 most populous metropolitan areas—the CMSAs of New York, Los Angeles, Chicago, San Francisco, Philadelphia, Detroit, and Boston.

The Metropolitan Turnaround

Until the 1970s, metropolitan areas held a strong population growth advantage over nonmetropolitan areas during every decade of this century except the 1930s. Metropolitan growth tapered off during the Depression years of the 1930s, following several decades of explosive expansion, then rocketed upward again after World War II. No deviation from the trend toward population concentration has been greater than in the 1970s, when nonmetropolitan and metropolitan growth patterns changed direction completely (see Box 2).

A second redistribution reversal in the 1970s was the slower rate of growth for major metropolitan areas over 1 million population. In the past, the nation's "million-plus" areas grew faster than smaller-sized areas. The reversal of this trend in the 1970s is as remarkable as the increased population growth in nonmetropolitan territory. This reversal is evident in Figure 1. In the 1960s, large metropolitan areas grew faster than smaller metropolitan areas, and much faster than nonmetropolitan areas. In the 1970s, the large areas grew at about half the rate of smaller metropolitan areas or nonmetropolitan areas, based on constant boundaries established June 30, 1989.

Box 2. Measuring Metropolitan Change

There has been some confusion about whether or not nonmetropolitan America actually grew faster than metropolitan America during the 1970s, because the share of the total population classified as metropolitan increased between 1970 and 1980 (from 68.6 percent to 74.8 percent).[1] This increase occurs when a "variable boundary" measure of metropolitan change is used, but not when a "constant boundary" measure is employed.[2]

The first measure compares the population in 1970 within the boundaries of metropolitan areas of the time with the population in 1980 within the metropolitan boundaries as defined in 1980 (including some territory that was classified as nonmetropolitan in 1970).

The constant boundary approach compares the populations for 1970 and 1980 using the same set of metropolitan boundaries. When using this latter approach, which confines the comparison to population change alone without adding the effects of new territory, the metropolitan growth rate was below the rate of population growth in nonmetropolitan areas.

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1. An analysis of metropolitan and nonmetropolitan growth trends appears in Glenn V. Fuguitt, David L. Brown and Calvin L. Beale, *Rural and Small Town America*, 1980 Census Monograph (New York: Russell Sage, 1989).
2. Alternative strategies for analyzing metropolitan and nonmetropolitan growth using constant boundary measures are discussed in Glenn V. Fuguitt, Tim B. Heaton and Daniel T. Lichter, "Monitoring the Metropolitanization Process," *Demography*, Vol. 25, No. 1 (February 1988).

These shifts in the 1970s are signs of pervasive deconcentration of the national population. Approximately 80 percent of the nation's nonmetropolitan counties gained population in the 1970s, compared to less than 45 percent in the two prior decades. Extensive analyses by population experts Calvin Beale, Glenn Fuguitt, and Kerry Richter point out the dramatic change from net outmigration to net in-migration of the nonmetropolitan population for most of the 26 economic subregions of the United States.[5]

While the great majority of nonmetropolitan counties gained population, metropolitan population losses in the 1970s were concentrated among major metropolitan areas of the Northeast and Midwest. Eight metropolitan areas over 1 million population in the Northeast and Midwest lost population in the 1970s—New York, Philadelphia, Detroit, Cleveland, St. Louis, Pittsburgh, Milwaukee, and Buffalo. Large metropolitan areas in the South and West did not decline, but their population gains were lower in the 1970s than in the 1960s. In contrast, small metropolitan areas, particularly those with populations under 250,000 located in the South and West, grew faster than all the other metropolitan categories.

Explaining the 1970s Reversals

These two redistribution reversals—the nonmetropolitan turnaround and the metropolis growth slowdown—were not spread uniformly across the 1970s. Researchers Larry Long and Diana DeAre demonstrated that the nonmetropolitan growth advantage began in the late 1960s and peaked in 1974–75, before tapering off at the end of the decade.[6] Census Bureau metropolitan area expert Richard Forstall's analysis shows that the reversal in growth rates among metropolitan areas according to their size peaked in 1973–75.[7]

Large metropolitan areas lost employment opportunities in the severe recession of 1973–75 and therefore, found it difficult to attract people, particularly in metropolitan areas where employment was dominated by cyclical industries. The decline in military expenditures toward the end of the Vietnam War contributed to employment losses in metropolitan areas with significant defense industries, among them Seattle, Los Angeles, and Boston.

The fact that both reversals became accentuated during the 1973–75 recession suggests at least one "period" influence that may have affected population redistribution in the 1970s (see Box 3, page 10, for analysis of three different explanations for the 1970s trends). Period explanations also help explain some of the population growth in nonmetropolitan areas.[8] A worldwide food shortage in 1972–73, coupled with an OPEC-induced oil shortage in 1973–74, led to an increase in demand for food and fuel-related commodities. Although employment in agriculture had already dropped to low levels in the 1960s, the rising price of food braked further decline in largely agricultural areas.

The energy crisis precipitated nonmetropolitan growth even more than the food shortage by spurring development of extractive industries in the Southwest, Mountain West, and Appalachia. Further, the weakened U.S. dollar during the early 1970s served to counter international competition for products of the labor-intensive manufacturing activities that had already moved to nonmetropolitan areas, where costs were lower.

Another important period stimulus for nonmetropolitan growth involved the large baby-boom generation reaching college age, which increased the enrollments at state universities and community colleges located in nonmetropolitan areas. The entry of baby boomers into the labor market during this period also accentuated the movement away from metropolitan areas with declining employment prospects. Finally, large numbers of people were entering their retirement years during this period, stimulating demand for retirement homes in nonmetropolitan territory. These major events of the 1970s combined to reduce the attractiveness of large metropolitan areas and to stimulate population growth in nonmetropolitan areas.

While period effects surely played a role, the severe declines in population and employment suffered by several large metropolitan areas were even more the result of a fundamental restructuring of the economy. Mounting foreign competition, rising labor costs, growing obsolescence in our industrial infrastructure, and declining profitability combined to scale down manufacturing production, a trend that has been labeled *deindustrialization*. This economic adversity particularly affected metropolitan areas such as Pittsburgh and Buffalo, where heavy manufacturing constituted a key economic sector. These areas suffered substantial reductions in employment and selective outmigration. In some cases, lower-level production activities relocated to smaller metropolitan areas or to nonmetropolitan areas with low labor costs and more hospitable business climates. In other cases, these activities moved overseas or were eliminated entirely.

The 1970s also saw the emergence of social and economic conditions that permitted both employers and individuals to live in small communities, which surveys show most Americans prefer.[9] These new conditions form the basis of the "deconcentration" explanation of the 1970s reversals, as explained in Box 3. The groundwork for this deconcentration trend was laid in earlier decades, when infrastructure improvements (for example, all-weather road construction and rural electrification) facilitated the movement of some nonagricultural employment to smaller communities during the 1960s. Changes in production and communication technologies in the 1970s gave rise to new employment opportunities outside of metropolitan areas, which in turn brought to nonmetropolitan communities a growing number of amenities previously found primarily in the cities.

Strong population gains were registered both in nonmetropolitan counties adjacent to the suburbs of metropolitan areas—the exurbs—and in remote counties that lay beyond the reach of commuting, although the growth of the latter counties tapered off at the decade's end. The growth of nonmetropolitan counties specializing in resort and recreational activities also contributed to population deconcentration. The growth of resort and recreation counties continued undiminished into the 1980s, unlike the experience of many other nonmetropolitan counties, where growth began to sag toward the end of the decade.

Trends of the 1980s

In the 1980s, some of the forces that had brought about both the nonmetropolitan turnaround and the major metropolitan decline began to shift. The nonmetropolitan turnaround, in fact, disappeared from 1980 to 1984, when metropolitan areas grew at an annual rate of 1.2 percent compared to only 0.8 percent for nonmetropolitan areas. Only 70 percent of all nonmetropolitan counties gained population during this period, down from the pace of the 1970s.[10] Still, nonmetropolitan growth levels in the early 1980s continued to exceed their very low growth of the 1950s and 1960s, and the vast majority of nonmetropolitan counties were gaining in population.

But as mid-decade approached, population growth in nonmetropolitan counties plummeted to levels reminiscent of pre-1970 days. During 1983–86, only 45 percent of nonmetropolitan counties gained population. Although the average loss per county was not as large as in earlier decades, Calvin Beale points out, the incidence of this loss across counties was similar to that observed during the 1950s and 1960s, the peak years of farm consolidation.[11] While the rural renaissance appeared to come to a screeching halt in the mid-1980s,

Box 3. Theories Explaining the Metropolitan Transition

Three fundamentally different explanations have been offered to account for the metropolitan and regional reversals of the 1970s. Each has different implications for the future. The three can be characterized as: "period," "regional restructuring," and "deconcentration" explanations.[1]

"Period" explanations see the patterns of the 1970s as a temporary reversal, or distortion, of a long-term trend toward urbanization. In other words, the trends of the 1970s were unique. A convergence of economic and demographic circumstances caused population growth to slow or decline in metropolitan areas. The 1973–75 recession and subsequent economic dislocations led to disinvestment in manufacturing activities within large industrial metropolises. Meanwhile, smaller cities and towns gained from the development of extractive industries in response to the OPEC-induced energy crisis of 1973 and from the spread of low-paying manufacturing jobs related to the period's deindustrialization. A booming rural-based recreation industry, aided by a growing elderly population, added to the nonmetropolitan gains.

The "regional restructuring" explanation also acknowledges the economic dislocations of the 1970s, but views the decade's deindustrialization as an intermediate step toward a new geography of metropolitan growth. Proponents of this view believe that urbanization will continue as an important trend, but that metropolitan growth will occur in different geographic regions than in the past and for different reasons. The growing areas of the nation will be those that successfully redirect their economies toward advanced service delivery, high-tech research and development, and recreation and leisure-time activities. Metropolitan areas that cannot successfully make the transformation from industrial production to post-industrial services will continue to decline. Nonmetropolitan areas that are dependent on industrial production also will face reduced prospects for growth in the years ahead.

The "deconcentration" explanation views the 1970s as representing a fundamental break with the past. According to this view, Americans have long preferred to live in low-density, high-amenity residential locations. But in the past these preferences were constrained by the lack of available jobs and opportunities in these areas. During the 1970s, these barriers were lifted for many people. A rising standard of living and improvements in communications and production technologies meant that services, cultural amenities, and employment opportunities previously found only in large urban areas became more widely available. Deconcentration proponents also point to a rise in the "footloose" population, who can live wherever they choose. This explanation differs from the previous two in that it views the nonmetropolitan population gains of the 1970s as the beginning of a long-term shift away from urbanization.

These three explanations differ sharply in their implications for the future. The period explanation implies that traditional urbanization patterns will re-emerge once the forces of the 1970s "period effects" have subsided. The regional restructuring explanation anticipates a re-emergence of urbanization in those cities that are home to corporate headquarters, serve as advanced manufacturing sites, or are resort and recreation destinations. The deconcentration explanation suggests continued population dispersion away from metropolitan areas.

To illustrate the different impacts the two most extreme explanations would imply for the nation, alternative 50-year projections were constructed for two geographic categories—one category consists of metropolitan areas in the Northeast and Midwest with populations greater than 1 million, and the other category consists of nonmetropolitan counties in the South and West.[2] Each alternative projection starts with the actual 1980 populations. One projection assumes that the trends of the 1960s will return and continue for 50 years. This is consistent with the "period" explanation. The other projection assumes that the 1970s redistribution patterns will continue, consistent with the "deconcentration" explanation.

These projections yield dramatically different results. If we were to return to the 1960s trends, the nation's population would be much more centered in large northern metropolitan areas. By 2030, projected northern metropolis population would be almost twice the South and West nonmetropolitan population. However, if the 1970s trends were to continue, the northern metropolis population would decline steadily, while southern and western nonmetropolitan areas would gain population rapidly. The two areas would have nearly the same number of people by 2030. Neither of these extreme projections is likely to occur, of course, nor are they intended to be predictions. They simply point out the dramatic consequences of long-term population shifts.

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1. Frey, William H. "Migration and Depopulation of the Metropolis: Regional Restructuring or Rural Renaissance?," *American Sociological Review*, Vol. 52 (April 1987) pp. 240–257.
2. Ibid., pp. 245–246.

population estimates for the late 1980s show a moderation of nonmetropolitan declines that is fairly pervasive.[12] The adverse economic "period effects" on nonmetropolitan growth (discussed below) may have subsided.

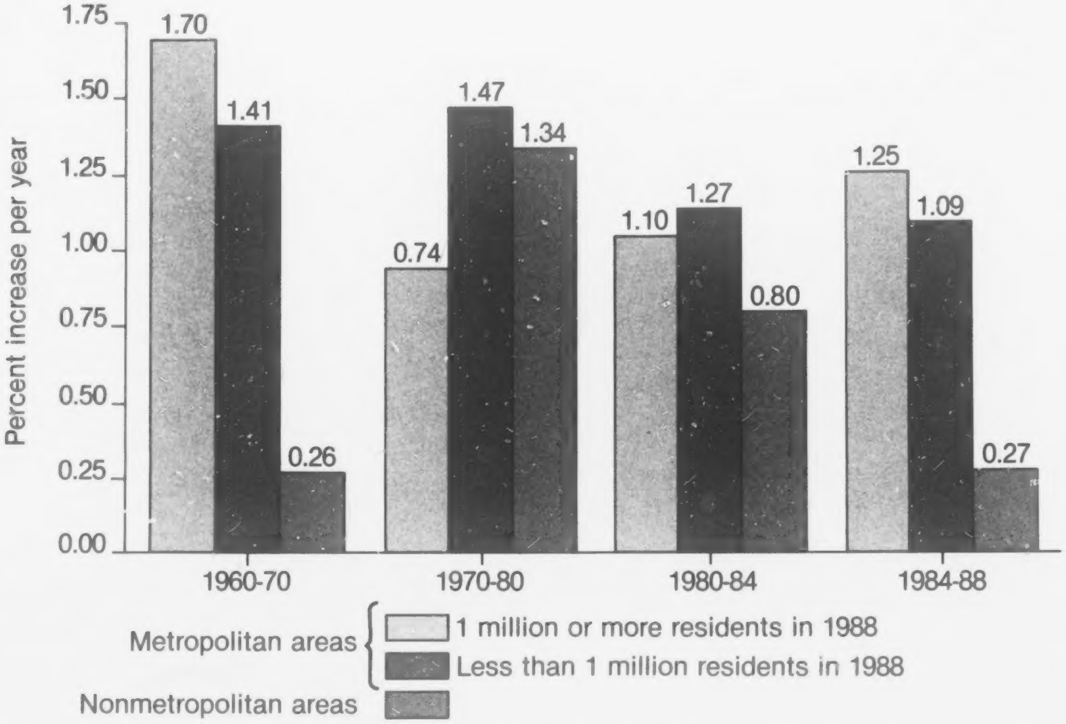
As to the fate of major metropolitan areas in the 1980s, they showed clear signs of reviving from their dismal 1970s growth performance. Statistics for 1980–84 and 1984–88 show population gains for the nation's "million-plus" metropolitan areas exceeding the gains of nonmetropolitan areas (see Figure 1, page 12). Average annual percent changes for these areas rose from 1.1 percent in 1980–84 to 1.25 percent in 1984–88. These are significant increases over the growth rate of the 1970s, but are far below the rate of the 1960s.

In three large metropolitan areas—New York, Philadelphia, and St. Louis—sizable population declines of the 1970s ended and growth reappeared, boosting the national totals for the "million-plus" metropolitan category. These three areas as a whole lost 780,000 residents during the 1970s but gained 945,000 between 1980 and 1988. However, four other large metropolitan areas with sizable 1970s population declines (Detroit, Cleveland, Pittsburgh, Buffalo) continued to lose population in the 1980s, in some cases to a greater degree than in the 1970s. As a group, these areas lost 444,000 people in 1970–80, and 404,000 people in 1980–88.

The vast majority of large metropolitan areas grew during both decades. Some, such as Phoenix, San Diego, and Tampa-St. Petersburg, have been growing at consistently high rates, a trend discussed later. On balance, the shifting fortunes of the large northern metropolitan areas have provided a major share of the fluctuations in the nation's metropolitan trends as a whole.

Metropolitan areas below 1 million in population grew more slowly during the 1980s than during the 1960s or 1970s. Although national trends mask wide vari-

Figure 1. Average Annual Population Growth for Metropolitan and Nonmetropolitan Areas, 1960–1988



Source: U.S. Bureau of the Census, 1960, 1970, and 1980 Population Censuses, and post-censal county estimates compiled by the Population Division.

ations across individual areas and regions, the slowdown of growth in smaller metropolitan areas has become pervasive. Areas with less than 250,000 residents were among the fastest growing during the 1970–80 period, but their growth declined by about one-third during the 1980s. Moreover, 32 of the 158 metropolitan areas of this size lost population in the 1980s, compared to only 10 in the 1970s.

Explaining the 1980s Shifts

Some analysts contended that the strong period influences of the 1970s distorted "natural" urbanization tendencies and predicted that these tendencies would re-emerge. But their predictions neglected to consider equally significant period influences specific to the 1980s: two severe recessions, an overvalued dollar, a worldwide decline in food prices, a decline in oil prices, and a stock market crash. On balance, the cumulative impact of these forces had greater adverse consequences for nonmetropolitan population growth than for metropolitan growth.

Calvin Beale's analysis of nonmetropolitan growth trends suggests why this might be the case.[13] First, nonmetropolitan areas specializing in labor-intensive manufacturing production were particularly hard hit by the recessions and overvalued dollar of the early 1980s. In 1980, these counties housed approximately 40 percent of the nonmetropolitan population. Their average annual population growth rates declined from 1.14 percent in the 1970s to only 0.36 percent over the 1980–86 period.

Second, the world agricultural surplus and the ensuing domestic farm financial crisis led to a decline in nonmetropolitan counties that specialized in agriculture. These counties, which stemmed long-term declines during the 1970s, housed approximately 15 percent of the country's nonmetropolitan population in 1980. Their response to the farm crisis was delayed but severe. Average annual growth rates dropped from 0.56 percent in the early 1980s to a *minus* 0.08 percent in the mid-1980s. In Iowa, 80 of 84 such counties lost population as the agricultural crisis took its toll.

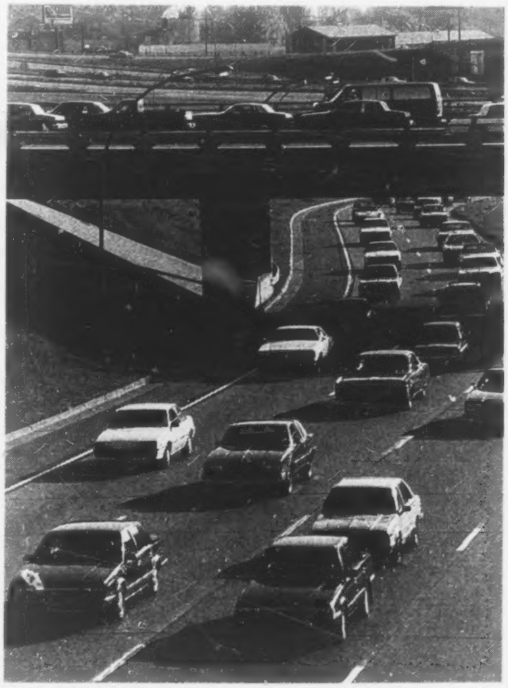
The dramatic rise and then sharp decline in petroleum prices contributed to the most volatile sequence of growth and decline. Counties specializing in mining (oil, coal, and metal), which contained just 7 percent of the 1980 nonmetropolitan population, saw their growth turn from an annual average rate of 0.14 percent in the first three years of the 1980s to a decline of minus 0.58 percent in 1983–86.

As was true of their nonmetropolitan counterparts, production-oriented metropolitan areas declined in population during the early 1980s, but showed a greater capacity to rebound as the recession subsided and the value of the dollar declined. The petroleum price roller coaster took metropolitan areas both large and small for a wild ride. Some were forced to diversify their economic base in order to survive. Toward the end of the decade, areas with major involvement in defense faced the possibility of cutbacks in federal financial support. The stock market crash in October 1987, and the ensuing drop in the financial services industry led to ripples of decline in the New York metropolitan area.

A more dominant influence on metropolitan growth in the 1980s was industrial restructuring. The heavy losses of jobs and population sustained as a result of deindustrialization in the 1970s were replaced, in some cases, by employment and population growth associated with more diversified local economies. Some areas, such as New York and Boston, were well-positioned to build on their strengths in financial services or high-tech development.[14] Yet for other areas, of which Detroit is the major example, decline related to deindustrialization was felt the most in the early 1980s. Located largely in the Midwest, these areas were centers for durable goods manufacturing such as primary metals, motor vehicles, rubber, and non-electrical machinery.[15]

Smaller metropolitan areas that were dependent on old-line manufacturing production were hit hard as well and faced employment and population declines. As much of this decline is structural rather than cyclical, these areas will need to diversify their economies to sustain growth in the future.

While the period economic forces of


Michael Siluk

A willingness to commute long distances has favored growth in exurban counties.

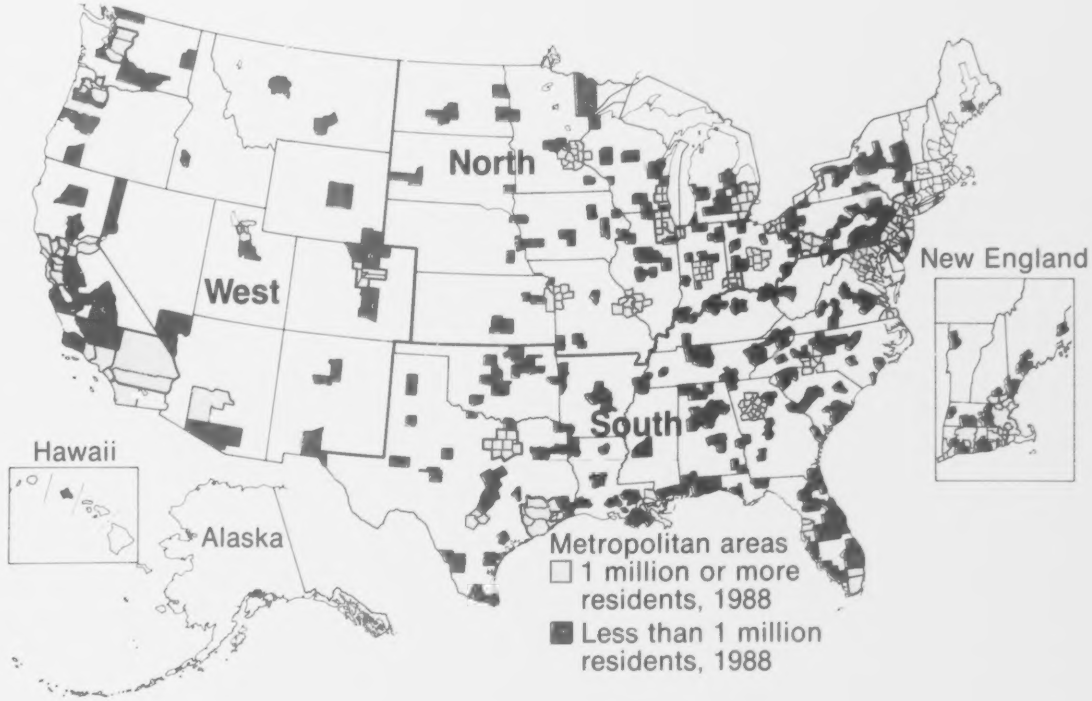
the 1980s were not particulary kind to nonmetropolitan America, there was evidence of a continued rural renaissance in selected communities. The fastest growing nonmetropolitan areas of the 1980s were in counties specializing in resort and recreation. In second place, after 1983, were exurban counties adjacent to the suburbs of large metropolitan areas and with strong commuting ties to the metropolis.

The ability of these exurban counties to withstand major economic shocks since the beginning of the 1970s and to be relatively strong population gainers indicates the power of Americans' preferences for living in low-density, high-amenity areas—even if it means commuting increasingly long distances to work. Some of these exurban counties are likely to become part of the adjacent metropolis when metropolitan area revisions are made after the 1990 Census.

The Regional Dimension

Even prior to the 20th century, the North has been the nation's most heavily urbanized region.[16] Many of the North's metropolitan areas began as trade and commercial centers in the early days of the nation. During this century, northern metropolitan areas grew because their location and large labor force gave them an advantage for manufacturing activities. In 1950, the North (defined in this *Bulletin* as a combination of the Northeast and Midwest regions) had more than two-thirds of the nation's manufacturing jobs, contained 10 of the country's 14 "million-plus" metropolitan areas, and was home to 65 percent of the total metropolitan population. Even today, the North contains fully 52 percent of the population living in all "million-plus" metropolitan areas, and 47

Figure 2. Metropolitan Areas by Region, United States, 1988


North
West
South
New England
Hawaii
Alaska
Metropolitan areas
☐ 1 million or more residents, 1988
■ Less than 1 million residents, 1988

Source: U.S. Bureau of the Census; see Appendix Table.

Table 2. Average Annual Population Change for Metropolitan and Nonmetropolitan Areas within U.S. Regions: 1960–70, 1970–80, and 1980–88

Region/area	Average annual population change (percent)		
	1960–70	1970–80	1980–88
North			
Large metropolitan areas*	+1.1	−0.1	+0.4
Other metropolitan areas	+1.1	+0.5	+0.4
Nonmetropolitan areas	+0.3	+0.8	+0.1
South			
Large metropolitan areas*	+2.8	+2.1	+2.1
Other metropolitan areas	+1.5	+2.0	+1.6
Nonmetropolitan areas	+0.1	+1.5	+0.7
West			
Large metropolitan areas*	+2.6	+1.8	+2.2
Other metropolitan areas	+2.2	+2.8	+2.0
Nonmetropolitan areas	+0.9	+2.7	+1.4

*Metropolitan areas with 1 million or more residents in 1988.

Source: U.S. Bureau of the Census, 1960, 1970, and 1980 Population Censuses, and county population estimates compiled by the Population Division.

percent of the total metropolitan population (see Figure 2).

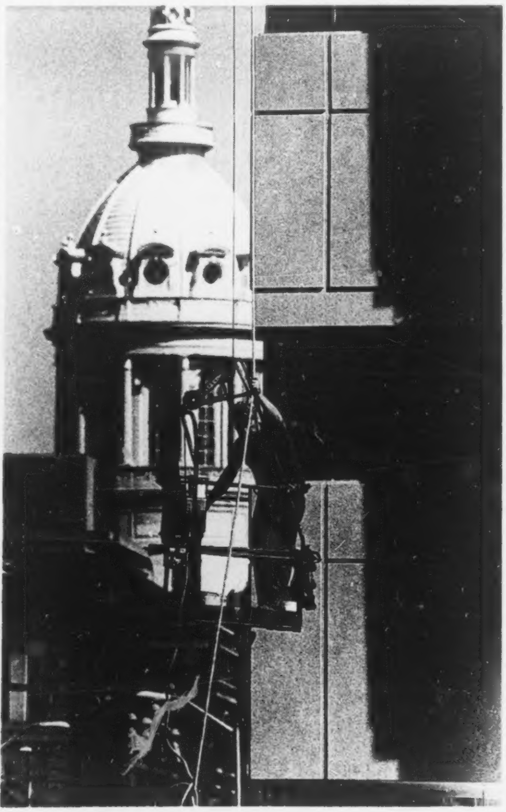
Metropolitan areas in the South and West grew as the result of the continued westward expansion that has characterized American history. Even so, by 1950, only 2 western metropolitan areas, Los Angeles and San Francisco, and 2 southern areas, Baltimore and Washington, D.C., were among the nation's 14 "million-plus" metropolitan areas. But metropolitan populations in the South and West were about to surge. By 1988, the number of southern and western "million-plus" metropolitan areas rose to 20, compared to 17 in the North.

Despite their different growth patterns, each of the nation's regions shared the urbanization patterns of the 1950s and 1960s and the counter-urbanization of the 1970s (see Table 2). Historically, within each region metropolitan areas grew significantly faster than nonmetropolitan areas. Building on traditional manufacturing strengths, the North's metropolitan areas continued to grow in the postwar economic prosperity, and their suburbs expanded. Western metropolitan areas grew at considerably faster rates as the boom in such "home-grown" industries as aerospace and electronics attracted new residents. Southern metropolitan areas gained, particularly in the 1960s, as this once lagging region became better linked to the national economy through the interstate highway system, improved infrastructure and educational systems, and pro-growth business attitudes.

The Surprises of the 1970s

In the 1970s—in contrast to the 1960s—all regions saw declines in growth in their "million-plus" metropolitan areas and gains in population growth in nonmetropolitan territory. Yet the North bore the brunt of the metropolitan population decline, and the South and West benefitted most from the nonmetropolitan population increase. While actual population losses were concentrated in a few large areas, all "million-plus" northern areas either suffered losses or had smaller population gains in the 1970s than in the 1960s.

Even in the rapidly growing South and West, "million-plus" metropolitan areas faced reduced growth in the 1970s. There were a few exceptions where major metropolitan areas enjoyed economies that were strongly linked to tourism and retirement growth (Tampa-St. Petersburg and Phoenix) to the period's oil boom (Houston), and to specialized industries such as defense-related manufacturing (San Diego, which also offered an attractive lifestyle). But for the most part, the "million-plus" areas of the South and West faced diminished growth. There were many reasons, including the economic attractions of small metropolitan areas and nonmetropolitan places within these regions, which drew migrants from the largest metros. Most large Sunbelt metropolitan areas had a net loss of migrants in their exchanges with smaller and nonmetropolitan areas within the region.[17]



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Southern metropolitan areas have grown as a result of stronger links to the national economy.

National nonmetropolitan gains in the 1970s reflect the experiences of the South and West. The continuing relocation of manufacturing activities into the Southeast, the growth of extractive industries in the Southwest and Mountain West, and the recreation-related growth in Florida and other Sunbelt areas all contributed to this pattern. To a lesser extent, northern nonmetropolitan areas outside the great plains also gained population from these trends during the 1970s, especially in the Upper Great Lakes states and New England.

The national population flows of the 1970s contributed heavily to a regional population redistribution—out of the North and into the South and West. These trends gave rise to the popular notion of a Snowbelt and a Sunbelt. Although these terms did not fully explain the dynamics of population distribution in the 1970s—after all, snowy Alaska and New Hampshire were growing rapidly, while sunny Los Angeles was not—they effectively captured the frustration of major northern industrial cities and the good times down South and out West.

The 1980s' Bi-Coastal Boom

In the 1980s, metropolitan growth increased most rapidly in areas near the Pacific or Atlantic coasts, while nonmetropolitan population declines became increasingly concentrated within the nation's interior. To be sure, the familiar regional dichotomy between the slow-growing North on the one hand and the rapidly growing South and West on the other (the Snowbelt versus the Sunbelt) remains useful in explaining overall population redistribution trends. But it is less useful in explaining the recent changes in population growth than a new dichotomy that distinguishes the nation's coastal areas from its interior territory.

This new scheme links an Atlantic Coast region (the states that border on the Atlantic) with a Pacific Coast region

(Alaska, California, Hawaii, Oregon, and Washington). It contrasts these regions with an interior region that includes the states of the Midwest, Rocky Mountains, and most of the South. Although the states bordering on the Gulf of Mexico are on a coast and, therefore, not "interior," they share many of the current demographic characteristics of America's heartland.

Large metropolitan areas on both coasts are increasing their population gains, while the interior, or heartland, metropolitan territory shows sharply reduced growth. In the Atlantic coastal states all types of territory, including nonmetropolitan areas, have been gaining population since the mid-1980s. Metropolitan areas have been increasing fastest, and the largest metropolitan areas on both coasts showed the most sustained pattern of increase during the decade of the 1980s.

The most characteristic pattern of the nation's heartland in the 1980s is its nonmetropolitan decline. This trend became accentuated in mid-decade as the interior states bore the brunt of the manufacturing, agricultural, and energy-extraction downturns, or the rolling recession. The large metropolitan areas in the nation's heartland also showed more sensitivity to various booms and busts during the 1980s than did coastal areas.

Prospects for the 1990s

The prospect is fairly bright for continued growth among the East and West Coast metropolitan areas. These areas, located in what has been called "the trade and defense perimeter" have developed niches as centers of advanced service and manufacturing industries that are highly competitive in the international marketplace.[18]

Nor are the prospects for the nonmetropolitan heartland as dim as they might appear from their experience in the 1980s. Still, many of the interior areas will need to develop more diversified economic bases to insulate them from the ups and downs of worldwide commodity prices.[19] And coastal cities that are too heavily concentrated in defense-related areas may need to find other strengths if the federal government cuts back on national defense.

The biggest uncertainties for the 1990s concern the growth prospects for heartland metropolitan areas whose economies remain tied to specialized, less-than-competitive industries. Economic diversification will be necessary, and there is evidence that this is occurring in Detroit, Cleveland, and Houston. Also, high housing prices and labor costs could brake the continued growth of the East and West Coast metropolitan centers. Citing the nation's bi-coastal "regional gentrification," R.D. Norton speculates that escalating living costs in large coastal areas and labor shortages elsewhere may push residents and jobs further inland.[20] (For a discussion of the demographic factors in regional population shifts see Box 4, page 20.)

The Top 20 Metropolitan Areas

The nation's top 20 metropolitan areas contain about half of the total population of the United States. An examination of how these areas are faring provides clues about the forces likely to shape metropolitan growth or decline as a whole in the 1990s. Some have fared much better than others.

The 20 largest metropolitan areas all have 1988 populations over 2 million, but they are dominated by New York's 18.1 million people and Los Angeles' 13.7 million (see Table 3). The combined populations of the largest 5 areas on this list exceed the combined populations of the remaining 15 by a wide margin.

The top rankings have remained surprisingly stable over the course of U.S. history. New York has been the nation's largest metropolitan area since the beginning of the 19th century. Philadel-

Table 3. The 20 Largest Metropolitan Areas, 1988

Metropolitan Area	Size (millions)	Rank		
		1988	1970	Change
New York CMSA	18.1	1	1	—
Los Angeles CMSA	13.7	2	2	—
Chicago CMSA	8.1	3	3	—
San Francisco CMSA	6.0	4	6	+2
Philadelphia CMSA	5.9	5	4	-1
Detroit CMSA	4.6	6	5	-1
Boston CMSA	4.1	7	7	—
Dallas CMSA	3.7	8	12	+4
Washington, D.C. MSA	3.7	9	8	-1
Houston CMSA	3.6	10	13	+3
Miami CMSA	3.0	11	16	+5
Cleveland CMSA	2.7	12	9	-3
Atlanta MSA	2.7	13	18	+5
St. Louis MSA	2.4	14	11	-3
Seattle CMSA	2.4	15	17	+2
Minneapolis-St. Paul MSA	2.3	16	15	-1
San Diego MSA	2.3	17	22	+5
Baltimore MSA	2.3	18	14	-4
Pittsburgh CMSA	2.2	19	10	-9
Phoenix MSA	2.0	20	34	+14

Source: U.S. Bureau of the Census, 1970 Population Census and county estimates for 1988 prepared by the Population Division.

phia and Boston have ranked close to the top from the beginning of nationhood, and Chicago for the past century. The seven largest metropolitan areas in 1988 were also the seven largest in 1950. However, since 1970, San Francisco moved to fourth place, pushing Philadelphia and Detroit down to fifth and sixth.

This stability among the top 7 masks the turmoil in the lower rankings. Among the 13 other areas in the top 20, Cincinnati and Milwaukee have fallen out of the group since 1970 (using constant boundaries) and have been replaced by San Diego and Phoenix. Seven of the 13 (including the 2 new ones) moved up in rank. Miami-Fort Lauderdale climbed from 16th to 11th, Atlanta advanced from 18th to 13th, and Dallas-Fort Worth rose from 12th to 8th. Phoenix jumped an astonishing 14 places, from 34th to 20th. San Diego moved up 5 places, from 22nd to 17th. Among the decliners, Pittsburgh plunged from 10th to 19th, Baltimore dropped from 14th to 18th, Cleveland from 9th to 12th, and St. Louis from 11th to 14th place.

The net effect of these recent rapid changes in rank among the second echelon of major metropolitan areas, whose populations are between 2 and 4 million, has been to elevate the importance of metropolitan areas in the West and South and reduce the influence of the slower growing older northern areas.

The Forces Behind Growth and Decline

The simple Sunbelt-Snowbelt distinction does not tell the whole story of the past two decade's fortunes for major metropolitan areas. It is true that with only three exceptions (Minneapolis-St. Paul in the North, and Baltimore and Washington, D. C. in the South), each of the large northern Snowbelt metropolitan areas grew more slowly than each of the large southern and western Sunbelt areas in both the 1970s and the 1980s. But other patterns are also important (see Figure 3).

Deindustrialization largely explains

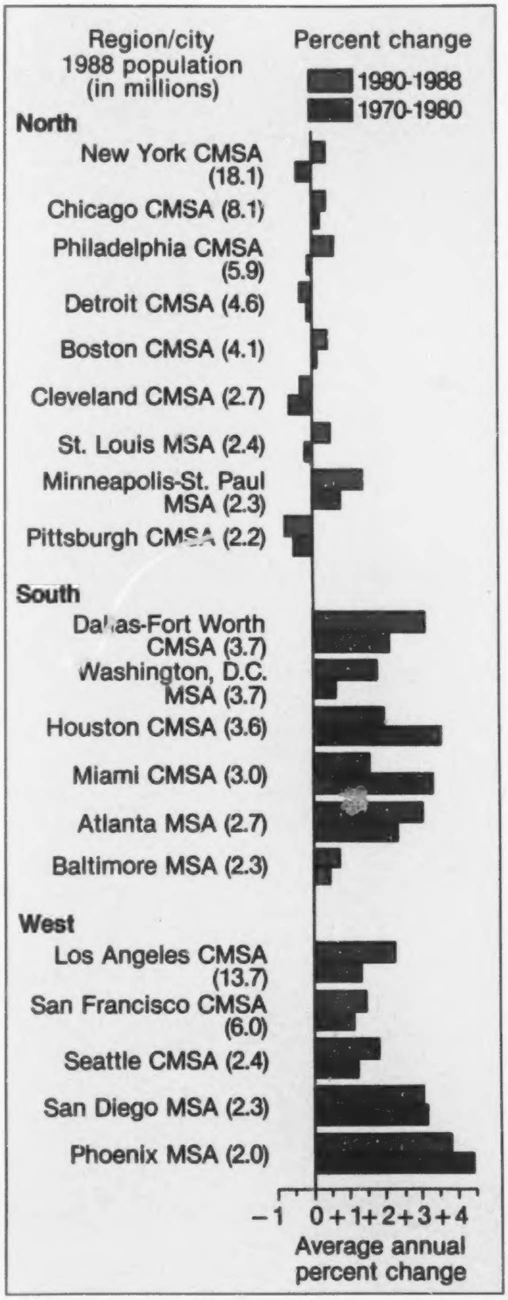
the population declines of major northern metropolitan areas in the 1970s. Areas associated with heavy industry manufacturing (Pittsburgh and Cleveland) were the greatest population losers, as measured by the annual average rate of change. Areas with more diversification, but also with large manufacturing components (New York, Philadelphia, St. Louis) sustained losses as well. Detroit did poorly in the 1970s (and declined even more in the 1980s than in the 1970s, because its auto industry was hit harder by the recession and foreign competition). Two other diversified northern areas, Chicago and Boston, did somewhat better in the 1970s.

Within the South and West, older, more established areas grew less rapidly than the average for these regions in the 1970s. Baltimore and Washington in the South, and San Francisco, Seattle, and Los Angeles in the West, all grew less than 1.5 percent per year, versus growth rates for the other large Sunbelt areas of between 2.2 percent (Dallas-Fort Worth) and 4.4 percent (Phoenix). In other words, it was not enough simply to be located in the Sunbelt for robust growth to occur, nor did a Snowbelt location necessarily portend demographic doom.

The declines from deindustrialization in most large northern metropolitan areas and in older southern and western areas contrasted with the strong growth among selected sun-and-fun destinations such as Phoenix or booming industrial places such as Houston in the 1970s. This distinction broke down in the 1980s, however, as northern areas, though slow-growing, varied more sharply from each other in their population growth rates. In the South and West, moreover, the differences apparent in the 1970s became less striking in the 1980s, as older, established areas rebounded, while younger "sun spots" grew less rapidly.

These shifts in the fortunes of individual large metropolises are consistent with the bi-coastal growth patterns

Figure 3. Average Annual Change for the 20 Largest Metropolises, 1970–1980 and 1980–1988



Source: U.S. Bureau of the Census, 1970 and 1980 Population Censuses, and post-censal county estimates compiled by the Population Division.

Box 4. The Demography of Population Growth and Decline

An area's population growth reflects the net effect of migration, births, and deaths. People who move tend to be younger than those who do not move. As a result, fast-growing areas typically have higher fertility and lower mortality than areas with sustained out-migration. When an area gains population from migration, then, its population gains from natural increase (births minus deaths) are also greater. This trend was generally the case for the United States in the 1980–87 period.

Across regions, net migration distributed the population out of the North and into the South and West in the 1980s. Within regions, net migration redistributed the population toward metropolitan areas. The natural increase component of population growth for the most part amplifies these net migration patterns. Significantly lower levels of natural increase occur in the North than in the South and West. And, within the North and South regions, though not true in the West, natural increase is lower for nonmetropolitan than for metropolitan areas.

Net migration itself consists of both interstate migration and international migration (immigration). The latter has historically had its greatest effect on the large East Coast metropolitan ports of New York, Philadelphia, and Boston. However, as America attracted greater numbers of immigrants from Latin America and Asia, the large metropolitan areas on the West Coast and in the Southwest and Florida became immigrant magnets as well. Data compiled for the 1975–80 period show that immigration accounted for three quarters of the total net migration gains in the large metropolitan areas of the West, about half the net migration gains in large southern metropolitan areas, and considerably reduced the population losses of large northern metropolitan areas.[1]

Immigration has a significant effect on population growth in several individual metropolitan areas (see table). In 1988, the New York and Los Angeles

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After two decades of population decline, Detroit will need to diversify its economy to attract new residents.

Metropolitan Areas with the Greatest Immigration, 1988[a]

Areas with largest numbers of immigrants		**Areas with highest rates of immigration**	
Metropolitan Area	Number	Metropolitan Area	Rate[b]
1. New York, NY-NJ-CT CMSA	134,556	Miami, FL CMSA	1.45
2. Los Angeles, CA CMSA	110,450	Naples, FL MSA	0.88
3. Miami, FL CMSA	43,600	West Palm Beach, FL MSA	0.81
4. San Francisco, CA CMSA	41,586	Los Angeles, CA CMSA	0.80
5. Chicago, IL-IN-WI CMSA	25,947	New York, NY-NJ-CT CMSA	0.74
6. Washington, DC-MD-VA MSA	18,032	Laredo, TX MSA	0.72
7. Boston, MA-NH CMSA	15,461	El Paso, TX MSA	0.71
8. San Diego, CA MSA	13,351	San Francisco, CA CMSA	0.69
9. Houston, TX CMSA	11,799	McAllen, TX MSA	0.65
10. Philadelphia, PA-NJ-DE-MD CMSA	10,543	Honolulu, HI MSA	0.57

[a] Immigrants admitted to the United States, FY 1988, classed by intended area of residence.
[b] Immigrants as percent of resident population, 1988.

Source: Immigration and Naturalization Service, special tabulations.

metropolitan areas received the most immigrants, with well over 100,000. Miami and San Francisco were next, with over 40,000 each. Immigrants intending to live in Miami were nearly 1.5 percent of Miami's total population in 1988, just slightly less than Miami's annual average rate of total population change. Smaller metropolitan areas in Florida and Texas join places like New York and Los Angeles on the list of areas where immigration played the greatest role in population growth in 1988.

References

1. Frey, William H., "United States: Counterurbanization and Metropolis Depopulation," in A. G. Champion, ed., *Counterurbanization: the Changing Pace and Nature of the Population Deconcentration* (London: Edward Arnold, 1989) pp. 34–61.

reported earlier in this *Bulletin*. In this context, it is significant that only 3 of the top 20, all industrial metropolises in the nation's heartland (Detroit, Cleveland, and Pittsburgh), lost population in the 1980s, a decade when other larger metropolises in the North revived to register gains.

Prospects for Growth

Which of the nation's major metropolitan areas face the brightest prospects for the future? That will depend to a large extent on the structure of their economies, which will signal their success or failure in creating jobs and attracting population. It is useful to distinguish four broad categories of large metropolises for this purpose.[21]

World Cities: The term "World Cities" characterizes those metropolitan areas that are strong financial and trading actors in the international economy. These areas, such as New York, London, Frankfurt, and Tokyo play major roles in their national economies as well. With the increasing globalization of the world economy, such areas will become even more dominant as centers of international finance, headquarters for multinational corporations, and major exporters of advanced services.

Four U.S. metropolitan areas meet World City criteria. They are New York, Los Angeles, Chicago, and San Francisco.[22] Together, they are home to a large share of the nation's biggest commercial banks, diversified financial companies, law firms, accounting firms, and consulting services with international expertise in management, advertising, and related activities.

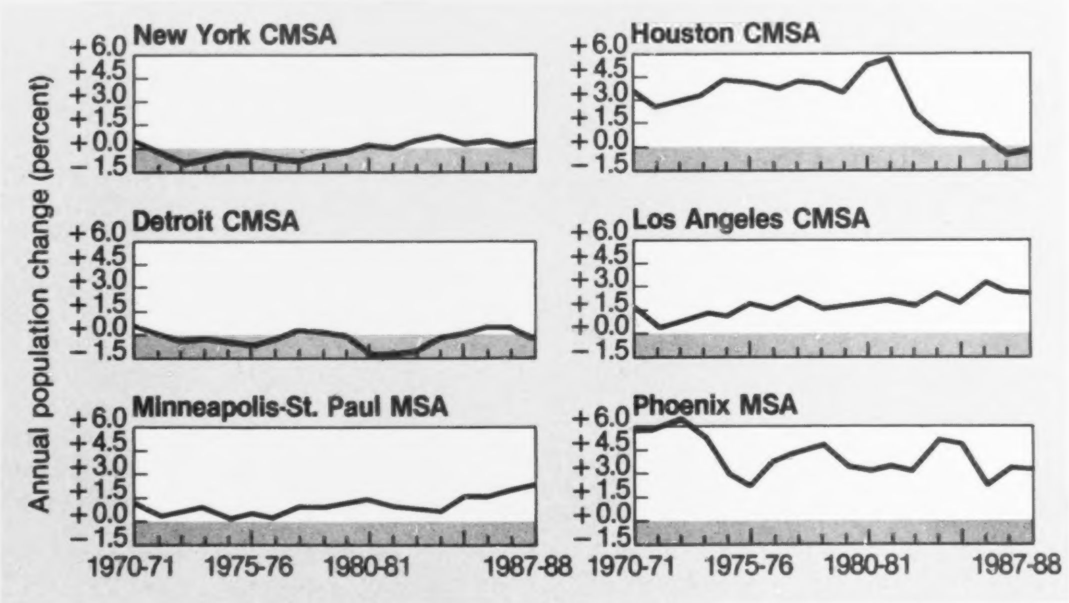
The significance of the strong "advanced services" sectors in these economies is reflected in the population growth patterns for the New York and Los Angeles metropolitan areas (see Figure 4). New York in particular overcame its unprecedented population declines of the 1970s. Throughout the 1980s, and even during the recessionary periods, New York enjoyed sustained employment growth and population increases. Much of the area's employment growth came from the strength of its advanced service sector, particularly in financial services.

The Los Angeles metropolitan area, while gaining population both in the 1970s and 1980s, sustained slowdowns in the early 1970s from recession and declines in the defense industry. Its strong advanced service sector, however, complemented by a diversified economy, contributed to its rising growth levels during the 1980s.

National Command and Control Centers: Just as the World Cities should prosper in the post-industrial global economy, a second echelon of major "Command and Control Centers" will become key actors in the domestic economic arena. These metropolitan areas are also heavily engaged in advanced service and complex corporate economic activities, but are (at least for now) less oriented to the international marketplace than are the World Cities.

These metropolitan areas tend to be centers of national and regional financial and corporate decisionmaking ac-

Figure 4. Annual Population Change, Selected Metropolitan Areas, 1970–1988



Source: U.S. Bureau of the Census, 1970 and 1980 Population Censuses, and post-censal county estimates compiled by the Population Division.

tivities and also serve as distribution centers for various national consumer markets. Some of them, such as Philadelphia, Boston, and St. Louis are building on their historical strengths as national control centers, while others, such as Atlanta, Dallas-Fort Worth and Minneapolis-St. Paul, have evolved as hubs of regional activity.

Specialized Areas: While all of the nation's 20 largest metropolitan areas have diversified economies, some have relied heavily on one or two main economic sectors. Such areas run the risk of sustaining severe downturns during periods when these sectors fail, though in turn they will fare far better than average when the sectors prosper.

Houston is a good case in point. When the price of oil soared during the 1970s and lines formed at gas pumps throughout the nation, the rapid increase in employment in oil-related industries and its multiplier effects led to a surge in Houston's economic and population growth. This growth was particularly strong between 1979–82 when other large areas, such as Detroit, suffered serious recessions. The oil-price crash of 1982 and energy glut in 1985, on the other hand, led to severe employment losses and a sharp slowdown in Houston's population growth, as Figure 4 makes plain.

Houston's celebrated "boom and bust" should serve as warning to other areas whose future growth prospects depend primarily on specialized activities. Washington, D.C.'s enormous growth in the 1980s reflects the growth of the government-related private sector. San Diego's growth is heavily related to the defense industry, including both military personnel and government contracts.

Some areas, such as Miami and Phoenix, have grown and diversified beyond the one or two industries that shaped their initial growth, but they have not yet achieved national Command and Control Center status. As Figure 4 demonstrates, they display above-average fluctuations in their annual population growth rates.

Smokestack Areas: Detroit, Cleveland, and Pittsburgh warrant the separate category of "Smokestack Area." The economic base of each of these areas has been dominated by heavy industry such as steel and automobiles. As these industries declined in importance nationally during the 1970s (and 1980s, in the case of Detroit), employment and population declined. These metropolitan areas can no longer count on their basic industry as the major stimulus for growth, and have made efforts to diversify. To some degree an increase in the number of high-level service and research jobs has compensated for the loss of production employment. Yet these areas have had greater difficulty diversifying their economies than the World Cities or Command and Control Centers.

Continued population growth is likely for the World Cities and Command and Control Centers. Both types of areas possess the kinds of advanced services that can produce "agglomeration economies" in today's world in the same way that port cities and manufacturing centers attracted population growth in the past.

The Specialized Areas will probably continue to diversify their economies so that they will not be subject to the same booms and busts that many of them experienced in the 1970s and 1980s—though for many, growth will remain dependent on the level of federal defense expenditures.

The growth prospects for the three Smokestack Areas is less easy to forecast. The 1990s will be a crucial decade for Detroit, Pittsburgh, and Cleveland. Each has the capital, management expertise, and educated labor force necessary to expand and diversify its industrial base. The question for all three will be how successful their existing industries, along with the newly added ones, will be in the post-industrial environment of the 1990s.

Michael Siluk

Minneapolis-St. Paul has emerged as a hub of regional financial activity and is gaining in population.

Metropolitan Winners and Losers

Considering the experience of all 283 metropolitan areas in the country, the population changes have been much more varied than among the 20 largest. From 1980 to 1988, for example, Naples, Florida grew 61 percent, but Casper, Wyoming declined 10 percent. The median growth rate for all metropolitan areas was 7.4 percent over this period in the 1980s. But almost a quarter of all metropolitan areas grew at twice this rate, and each of the 10 fastest-growing areas grew at better than five times this rate. At the other extreme, 50 metropolitan areas lost population over the 1980–88 period, more than twice the 23 that lost population during the 1970s.

The metropolitan areas that gained population in the 1980s differ from other metropolitan areas both in their number and in their growth characteristics. The 70 fastest growing areas, which form the upper quartile of metropolitan growth rates, are disproportionately located in the Sunbelt. All but four (Rapid City and Sioux Falls, South Dakota; Manchester, New Hampshire; and Portsmouth, New Hampshire-Maine) are located in the South and West. In contrast, more than 40 percent of all metropolitan areas are located outside these two regions. Further, there are relatively fewer small metropolitan areas with populations under 250,000 among the fast-growing group than there are among metropolitan areas as a whole.

Twenty-one of the areas that qualified for inclusion in this fast-growing quartile in the 1980s were different than those that qualified in the 1970s. Areas that moved into the category were larger in size than those they replaced. Six new members of the group were "million-plus" areas (Dallas-Fort Worth, San Antonio, Los Angeles, Norfolk-Virginia Beach-Newport News, Seattle, and Washington, D.C.), while only one that dropped out was a major area (Miami). In contrast, 16 of the 21 areas moving out of the fast-growing group were small metropolitan areas with populations under 250,000. Many of these were located in the Pacific Northwest, the Mountain West, and in the oil-producing regions of the South.

The 50 areas that lost population in the 1980s are also distinct from the rest. Over three-quarters of them are located in the North, and more than 60 percent are small areas. Thirty-four are small or moderate-sized manufacturing areas in the North, primarily in the Great Lakes states, in western Pennsylvania, and in upstate New York. Another 12 are located in mining areas of West Virginia and Kentucky, or in largely energy-dependent areas of the Southwest and Mountain West.

Only 4 of the areas that lost population in the 1980s are "million-plus" metropolitan areas (Pittsburgh, Buffalo, Detroit, and Cleveland). This contrasts sharply with the 1970s, when 8 of the 23 areas that lost population were large areas (including the 4 losers of the 1980s plus Philadelphia, St. Louis, New York, and Milwaukee).

In the 1970s, metropolitan decline as a whole was heavily influenced by the large population losses of the nation's major industrial metropolitan areas. Declines were relatively uncommon for smaller areas in all regions. However, the economic downturns of the 1980s affected smaller metropolitan areas more, resulting in slower population growth for many of them. At the same time, larger areas were reviving, both in their economic fortunes and in their population growth.

Southern and Western Gainers

Among the nation's individual metropolitan areas one finds strong gainers, and areas with population loss, in each of the nation's regions, and in both the 1970s and 1980s. In general, however, a large number of areas in the South and West grew faster than any of the areas in the North, both in the 1970s and the 1980s. Likewise, a large number of northern areas declined in both decades.

The top 10 gainers in the South and West between 1980 and 1988 (see Table 4, page 26) are also the top gainers nationwide. Eight of these are located in Florida, and half have 1988 populations under 250,000. Many are strong magnets for retirees. This list also includes 3 areas that may approach "1 million" status in the 1990s—Orlando and West Palm Beach, Florida, and Austin, Texas. Austin and Orlando have improved their already high-growth rankings in the 1970s and have continued to develop diversified economies.

While many of these rapidly growing areas in the South and West have fairly specialized economies, some have been consistent population gainers. The 4 fast-growing areas in Table 4, page 26 were also the fastest-growing areas in the 1970s. West Palm Beach has been among the top 10 gainers since 1960.

The growth levels of the top 10 gainers in the North still lie well below growth levels of many Sunbelt areas. Rapid City, South Dakota, though the top ranked Snowbelt gainer, grew more slowly than 60 other metropolitan areas in the South and West. Minneapolis-St. Paul, which ranks 10th on the list of Northern gainers, ranks only 86th on the nationwide list.

The top 10 northern metropolitan gainers are primarily small areas. Seven have populations under 250,000 and 5 of these are under 150,000. Five are located west of the Mississippi River and 3 in New England.

The 3 largest of the 10 fastest growing northern metropolitan areas are symbolic of current growth trends. Minneapolis-St. Paul, a large diversified metropolis, has developed newer industries and service center functions. Atlantic City is a resort area. And Lancaster is

Table 4. Top 10 Metropolitan Area Gainers and Losers in North, South, and

Top gainers—North

Area	Percent gain 1980–88	Size (1,000s) 1988
1. Rapid City, SD MSA	+16.6	82
2. Manchester, NH MSA	+15.9	150
3. Portsmouth, NH-ME MSA	+15.4	220
4. Sioux Falls, SD MSA	+14.7	126
5. Lancaster, PA MSA	+14.3	414
6. Lawrence, KS MSA	+13.1	77
7. Springfield, MO MSA	+12.8	234
8. Burlington, VT MSA	+12.0	129
9. Atlantic City, NJ MSA	+11.9	309
10. Minneapolis-St. Paul, MN MSA	+11.7	2,388

Top gainers—South and West

Area	Percent gain 1980–88	Size (1,000s) 1988
1. Naples, FL MSA	+61.1	139
2. Ocala, FL MSA	+55.0	190
3. Fort Pierce, FL MSA	+53.3	232
4. Fort Myers-Cape Coral, FL MSA	+50.6	309
5. Melbourne, FL MSA	+42.3	388
6. West Palm Beach, FL MSA	+41.9	819
7. Austin, TX MSA	+39.5	749
8. Orlando, FL MSA	+38.8	971
9. Las Cruces, NM MSA	+37.0	132
10. Fort Walton Beach, FL MSA	+37.0	151

Source: U.S. Bureau of the Census, 1980 Population Census and county estimates for 1988 prepared by the

one of several manufacturing areas close to the New York-Philadelphia-Washington metropolitan corridor that have benefitted from the spillover of new industries and residents in search of a lower cost of living and of doing business. Lancaster's rise in rank is a likely precursor to future growth for moderate-size metropolitan areas at arm's length from the large East Coast metropolises.[23]

The 10 metropolitan areas in the North with the largest percent declines in population from 1980 to 1988 span a region from western Pennsylvania and New York state to Iowa and northern Minnesota. Most of them are smaller, production-oriented manufacturing towns that continue to stagger from the aftershocks of deindustrialization. What is significant about this list is the absence of 3 large metropolitan areas that appeared on it during the 1970s—New York, Cleveland, and St. Louis. Also, while 6 small metropolitan areas (with populations less than 250,000) are on this list, only 3 such areas were on the list in the 1970s.

The most striking aspect of the list of losers for the South and West is that these are not Sunbelt areas at all. Five of the metropolitan areas lie close to industrialized areas of the Snowbelt. The decline of extractive and manufacturing industries in the Appalachian region, adjacent to Pennsylvania and the

West Regions, 1980–1988

Top losers—North

Area	Percent loss 1980–88	Size (1,000s) 1988
1. Steubenville-Weirton, OH-WV MSA	−9.8	148
2. Duluth, MN-WI MSA	−9.5	241
3. Waterloo-Cedar Falls, IA MSA	−9.2	148
4. Peoria, IL MSA	−7.0	340
5. Muncie, IN MSA	−6.6	120
6. Elmira, NY MSA	−6.1	92
7. Decatur, IL MSA	−5.9	124
8. Pittsburgh, PA CMSA	−5.7	2,284
9. Youngstown-Warren, OH MSA	−5.6	502
10. Buffalo, NY CMSA	−5.4	1,176

Top losers—South and West

Area	Percent loss 1980–88	Size (1,000s) 1988
1. Casper, WY MSA	−10.0	65
2. Wheeling, WV-OH MSA	−7.6	172
3. Enid, OK MSA	−7.2	58
4. Cumberland, MD-WV MSA	−5.0	102
5. Huntington-Ashland, WV-KY-OH MSA	−4.2	322
6. Danville, VA MSA	−3.3	108
7. Charleston, WV MSA	−3.3	261
8. Great Falls, MT MSA	−3.1	78
9. Parkersburg-Marietta, WV-OH MSA	−2.2	154
10. Eugene-Springfield, OR MSA	−1.9	270

Population Division.

Great Lakes states, has contributed to losses in 5 small metropolitan areas in West Virginia, Maryland, and Kentucky. The remaining 5 areas are broadly distributed across the Mountain West, the Pacific Coast, Oklahoma, and Virginia. Besides these 10, only 2 additional Sunbelt areas (Beaumont-Port Arthur, Texas, and Gadsden, Alabama) lost population in the 1980s. Only 1 lost population in the 1970s—Great Falls, Montana, out West to be sure, but scarcely "Sunbelt."

Baby-Boom Magnets

Which metropolitan areas will be most attractive to the baby-boom generation as its members reach their most productive and affluent years? Which areas are likely to lose large numbers of boomers? All 10 of the boomer magnets are located in the Sunbelt (see Table 5, page 28). Six of them—Denver, Washington, D.C., Houston, Atlanta, San Francisco, Dallas—are "million-plus" areas. Nine of the least attractive spots for the baby boomers are located in old industrial sections of Pennsylvania, New York, Massachusetts, Ohio, and West Virginia.

Magnets for the baby-boomers are defined as those areas with the largest proportion of adult baby boomers in their 1985 populations and which experienced a 1980–85 growth in their baby-boom population of at least 9.5 percent.

Table 5. Baby-Boom Magnets and Losers: Metropolitan Areas with 250,000 or More Residents in 1985

Metropolitan Area	Adult baby boomers[a]	
	Proportion of 1985 population	Percent change 1980–1985
Magnets[b]		
1. Denver, CO CMSA	0.32	+14.4
2. Washington, DC-MD-VA MSA	0.31	+14.7
3. Houston, TX CMSA	0.31	+15.4
4. Austin, TX MSA	0.30	+12.1
5. Atlanta, GA MSA	0.30	+19.9
6. San Francisco, CA CMSA	0.29	+ 9.9
7. Dallas, TX CMSA	0.29	+19.7
8. Colorado Springs, CO MSA	0.29	+ 9.6
9. Portsmouth, NH-ME NECMA	0.28	+13.1
10. Las Vegas, NV MSA	0.27	+14.4
Losers[c]		
1. Scranton-Wilkes-Barre, PA MSA	0.21	− 5.4
2. Buffalo, NY CMSA	0.22	−12.9
3. Johnstown, PA MSA	0.22	− 6.1
4. Youngstown, OH MSA	0.22	− 9.4
5. Huntington-Ashland, WV-KY-OH MSA	0.23	− 5.8
6. Pittsburgh, PA CMSA	0.23	− 7.2
7. Duluth-Superior, MN-WI MSA	0.23	−15.4
8. Erie, PA MSA	0.23	− 7.5
9. Springfield, MA NECMA	0.23	− 9.9
10. Syracuse, NY MSA	0.23	− 6.8

[a] Born between 1945–1960 (ages 25–40 in 1985).

[b] Baby-boom proportion above 0.27 and percent change above +9.5 percent.

[c] Baby-boom proportion under 0.24 and percent change under −5.0 percent.

Source: U.S. Bureau of the Census, County Population Estimates (Experimental) by Age, Sex, and Race, 1980–1985, computer data files.

Loser areas are those with the smallest proportions of adult baby boomers as of 1985 and which experienced a 1980–85 decline in their baby-boom population of more than 5 percent. This analysis includes only those baby boomers born between 1945 and 1960 (between the ages of 25 and 40 in 1985) in order to exclude the youngest members of the boom generation (born between 1961 and 1964) who were under age 25 in 1985.

It is not surprising to find that boomers are drawn to Washington, D.C., and San Francisco. Particularly for educated and affluent baby boomers, the capitol is attractive for its high-level government service and scientific employment opportunities. San Francisco is equally attractive to this group as a cosmopolitan financial center and World City. Both cities offer a high-quality lifestyle; San Francisco and Washington, D.C., ranked second and fourth, respectively, on an index of overall quality of life reported in *The Places Rated Almanac* in 1989.[24]

The remaining four "million-plus" baby boom magnets are also large, highly diversified metropolises. Although Houston's and Denver's hold on the baby-boom generation may have slipped somewhat since the mid-1980s as the energy boom ended, these areas are high-level, advanced service centers, like Atlanta and Dallas. Moreover, all of the six "million-plus" boomer magnets rank in the top 15 percent of all metropolitan areas on *The Places Rated*

Almanac's measures of employment prospects through 1995, cultural amenities, and overall quality of life.

The remaining smaller boomer magnets rank lower on most of these measures but provide the attractions of an education and industrial center (Austin and Colorado Springs), a growing resort economy (Las Vegas), and a moderate-sized diversified area (Portsmouth).[25]

The out-migration of baby boomers from the most unpopular areas is related to declines in employment opportunities during the late 1970s and early 1980s. None of the 10 least attractive spots with the baby-boom generation score high on *The Places Rated Almanac*'s measure of projected employment opportunities.

Pittsburgh ranks third on the overall quality of life index, however, and in the top 15 percent of all metropolitan areas on the arts and cultural amenities measure. With new community-driven initiatives to boost employment, this once prosperous area could gain baby boomers in the 1990s. As for all of the "loser" areas, the loss of so many baby boomers in their prime moving ages will make it difficult to replace them once they settle down and become less likely to move. Following them in the migratory age groups will be the much smaller baby-bust generation.[26]

Elderly Magnets

At a time when the national population is aging, and the elderly population has become increasingly mobile, a number of metropolitan areas may expect future growth as magnets for people of retirement age. Several metropolitan areas in Florida—a traditional destination for retirees—have already capitalized on the rising number of elderly migrants. Over the 1975–80 period, Florida attracted 428,000 elderly migrants, close to a 60 percent increase over a similar period 10 years earlier. The elderly constitute almost a quarter of total migration for all ages to Florida from other states, and have helped to establish a number of "elderly magnet" areas.[27]

Areas with large proportions of the elderly (aged 65 and over) are not necessarily magnets, per se, because their population mix may simply reflect a net out-migration of younger people, leaving the elderly behind. Magnet areas that attract the elderly are defined as those with the greatest proportions of elderly residents in 1985 and increases in the elderly population between 1980 and 1985 exceeding 19.5 percent (see Table 6).

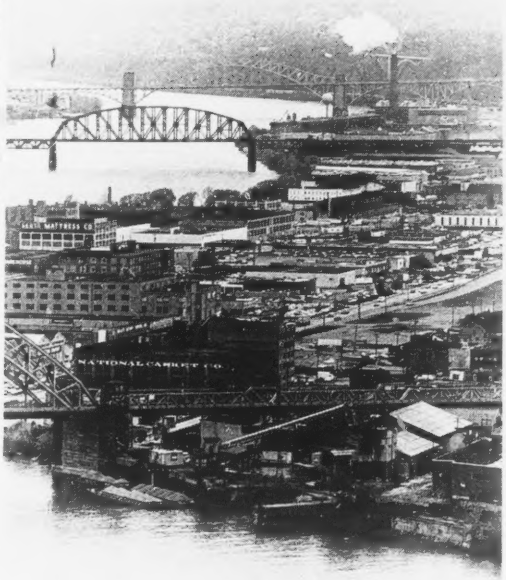
Five of the 10 elderly magnets are among the 6 fastest-growing metropolitan areas of the 1980s, which confirms

Table 6. Elderly Magnet Metropolitan Areas,[a] 1985

	Population ages 65 +	
Metropolitan Area	Proportion of 1985 population	Percent change 1980–85
1. Sarasota, FL MSA	0.31	+21.7
2. West Palm Beach, FL MSA	0.23	+22.6
3. Fort Myers, FL MSA	0.23	+31.4
4. Fort Pierce, FL MSA	0.21	+32.9
5. Naples, FL MSA	0.20	+39.8
6. Ocala, FL MSA	0.18	+39.3
7. Lakeland, FL MSA	0.15	+21.8
8. Medford, OR MSA	0.15	+19.5
9. Melbourne, FL MSA	0.14	+34.7
10. Tucson, AZ MSA	0.13	+21.1

[a] Proportion of population over age 65 equal to 0.13 or more, and the percent change 19.5 or greater.

Source: U.S. Bureau of the Census, County Population Estimates (Experimental) by Age, Sex, and Race, 1980–1985, computer data files.



U.S. Dept. of Housing and Urban Development

Pittsburgh lost population in the 1970s and 1980s, yet offers a highly rated quality of life.

that the elderly population is contributing significantly to gains of fast-growing areas in Florida (West Palm Beach, Fort Myers, Fort Pierce, Naples, and Melbourne). Sarasota, where the elderly are the highest proportion of the total population and have enjoyed strong recent gains, is Florida's premier elderly magnet. But other metropolitan areas are also gaining population because they are attractive to retirees.

The Metropolitan Minority Population

Some metropolitan areas have seen a rapid increase in their minority populations in recent years. Nationally, the population of racial and ethnic minorities has been growing faster than have non-Hispanic whites. The 1980–85 growth rates for Hispanics, blacks, and Asian and other races were 22.9 percent, 8.3 percent, and 36.1 percent, respectively. The total U.S. population grew only 5.4 percent during the period.

Blacks, Mexicans, and other Hispanic and Asian groups live in all parts of the country and in virtually every metropolitan area. To a much greater degree than the majority population, however, minorities concentrate in specific metropolitan areas. Estimates prepared by David L. Word of the U.S. Census Bureau for areas with large concentrations of blacks, Hispanics, and members of other races (most of whom are Asians) appear in Table 7.

Since 1970, black metropolitan redistribution patterns have come closer to white patterns than was the case in the 1950s or 1960s.[28] The 1940s saw a strong out-migration of blacks from the South to selected large metropolitan areas in the North—particularly New York, Philadelphia, Chicago, and Detroit. During this period the white population showed a net out-migration from the North to metropolitan areas in the West and South.

In the 1970s and early 1980s, blacks also began moving to the South. Large southern metropolitan areas showed higher rates of growth in the black population than the northern areas that had attracted blacks in the past. While blacks did not participate in the nonmetropolitan turnaround of the 1970s, nonmetropolitan areas gained blacks to a greater extent during that decade than they had in the past.

The movement of blacks across all parts of the country is evident in David Word's population estimates for 1985, which show that 223 of the nation's metropolitan areas contained black populations exceeding 10,000. In all but 6 of these areas the black population increased between 1980 and 1985. Yet Word's estimates also point to the continued concentrations of blacks in selected places. Almost 30 percent of the black metropolitan population is located in

Table 7. Metropolitan Areas with the Largest Populations of Blacks, Hispanics, and Asians and Other Races, 1985

Metropolitan Area*	Minority population 1985 (1,000s)	Percent increase 1980–85	Proportion of total population
Black populations exceed 500,000		Blacks	
1. New York MSA	3,201	+ 8.8	0.18
2. Chicago MSA	1,645	+ 5.2	0.20
3. Los Angeles CMSA	1,194	+12.1	0.09
4. Philadelphia CMSA	1,109	+ 6.2	0.19
5. Washington, D.C. MSA	965	+10.3	0.27
6. Detroit CMSA	949	+ 3.1	0.20
7. Houston CMSA	641	+13.6	0.18
8. Atlanta MSA	608	+15.6	0.25
9. Baltimore MSA	592	+ 5.6	0.26
10. San Francisco CMSA	524	+11.2	0.09
Hispanic populations exceed 500,000		Hispanics	
1. Los Angeles CMSA	3,660	+32.3	0.28
2. New York CMSA	2,346	+14.7	0.13
3. Miami CMSA	815	+30.0	0.28
4. San Francisco CMSA	775	+19.4	0.13
5. Chicago CMSA	757	+22.2	0.09
6. Houston CMSA	595	+33.3	0.17
7. San Antonio MSA	568	+16.9	0.47
Asian/Other populations exceed 500,000		Asian/Other	
1. Los Angeles CMSA	1,061	+51.2	0.08
2. San Francisco CMSA	752	+45.5	0.13
3. New York CMSA	604	+40.4	0.03
4. Honolulu MSA	539	+13.9	0.64

*Metropolitan areas with 500,000 or more blacks, Hispanics, or Asians and Other Races.

Source: Word, David L., "Population Estimates by Race and Hispanic Origin for States, Metropolitan Areas, and Selected Counties: 1980 to 1985," *Current Population Reports*, P-25, No. 1040-RD-1 (Washington, D.C.: U.S. Bureau of the Census, 1989).

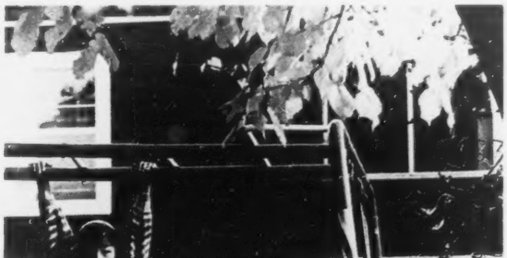
just 4 large metropolitan areas—New York, Philadelphia, Chicago, and Detroit. The 10 areas with black populations over one-half million comprised nearly half of the total black metropolitan population in 1985.

America's Hispanic ethnic groups are also concentrated in a few metropolitan areas, primarily in the Southwest and in large immigrant ports of entry. California and Texas together were home to nearly 55 percent of the Hispanic population in 1985. The two individual metropolitan areas with the largest numbers of Hispanics are Los Angeles, with 3.6 million, and New York, with 2 million. Miami, San Francisco, Chicago, Houston, and San Antonio follow, all with more than 500,000 Hispanics. In 1985, 94 metropolitan areas had Hispanic populations exceeding 10,000, and each of these experienced gains over the 1980–85 period.

There is clearly a dispersion of Hispanics across metropolitan areas, with the greatest concentrations in the South and West, reflecting the proximity to Latin America. By and large, the three major Hispanic groups—Mexicans, Cubans, and Puerto Ricans—cluster in different areas. Mexican Americans live primarily in metropolitan areas of the Southwest, Cubans in Miami, and Puerto Ricans in the New York area.

The Census Bureau's "Asian and Other Races" category includes Asians, Pacific Islanders, American Indians, Eskimos, and Aleuts. Asians are by far the largest group within this category, and, with Pacific Islanders, make up at least 70 percent of the total. U.S. Asians are highly concentrated in metropolitan areas, reflecting the fact that many are recent immigrants who locate in ethnic communities in large ports of entry.

Four such areas dominate as residential locations for Asians—Los Angeles, San Francisco, New York, and Honolulu. Together, these 4 areas are home to almost 40 percent of the nation's Asian population. Moreover, the 1980–85 growth rate for this population in the first 3 areas exceeds their growth rate nationwide. Still, there are signs of dispersion. In 1985, 65 metropolitan areas had more than 10,000 people in the Asian-and-Other-Race category, and all of these increased their totals over the 1980–85 period. The Houston and Dallas metropolitan areas, in particular, sustained high rates of growth in their Asian and other race populations.[29]



CLEO

U.S. Asians are highly concentrated in metropolitan areas.

Will Minorities Become the Majority?

Rapid immigration from Asia and Latin America, combined with low fertility rates for the total U.S. population, has prompted forecasts of minorities eventually becoming the majority, outnumbering non-Hispanic whites. If so, the trend will occur first in the metropolitan areas with large concentrations of minorities. Asians and Pacific Islanders are already nearly two-thirds of Honolulu's total population—not surprising given Hawaii's status as a Pacific island that is closer to Tokyo than to Chicago. Hispanics are nearly a majority of San Antonio's population.

There are 6 smaller metropolitan areas that have majority Hispanic populations, all of which are located close to the Mexican border.* Also, several small southern metropolitan areas with traditionally large black communities have black proportions that approach a majority.** But as of 1985, most large metropolitan areas are not close to becoming dominated by any single minority group. In all 10 of the metropolitan areas with large black populations, their proportion is well below half. Aside from Honolulu and San Antonio, the same is true for areas with large numbers of Hispanics and Asians.

In two large metropolitan areas, however, the combination of minority groups exceeds the non-Hispanic white population. In Los Angeles the combined proportions of Hispanics, blacks, and the Asian-and-Other-Races category is above 50 percent. And in San Antonio, the large Hispanic population combined with the black population also forms a majority of the total metropolitan population. Miami, with its large black and Cuban populations, is close to having a "minority majority." In New

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* The Texas metropolitan areas of Laredo, McAllen, Brownsville, El Paso, and Corpus Christi, and Las Cruces, NM.

** Including Pine Bluff, AR; Jackson, MS; Albany, GA; and Memphis, TN.

York and San Francisco, where non-Hispanic whites are still a large majority, the population of blacks, Hispanics, and Asians and other races is growing faster than the non-Hispanic white population.

Heavy immigration from Asia and Latin America, and low levels of immigration from Europe, are likely to continue in the future. These trends suggest that in particular ports of entry non-Hispanic whites will eventually become a minority. Another factor will be the extent to which blacks remain concentrated in major metropolitan areas in the future, or share more fully in the broad population redistribution trends of the majority population.

Central Cities and Their Suburbs

The past two decades have seen dramatic changes in population dynamics within metropolitan areas—between central cities and their suburbs, the two metropolitan components. Central-city blacks began moving to the suburbs in the 1970s, and pockets of "gentrification" emerged in central cities as white baby boomers restored homes in downtown neighborhoods. These trends helped to change the image of "black cities, white suburbs," though not enough to curtail the emergence of new pockets of underclass poverty in cities.

The metropolitan-wide growth slowdown of the 1970s led to lower rates of suburbanization compared to the 1950s and 1960s. Still, it was the central cities of many large areas that bore the brunt of these metropolitan-wide population declines. Several central cities—St. Louis, Buffalo, Cleveland, and Detroit—lost more than one-fifth of their populations in the 1970s. The experience of the 1980s suggests that some of these cities may become specialized, gentrified "nodes" within larger multi-centered metropolitan areas. Many central cities will become more racially diverse as they house growing concentrations of new immigrant groups.

The nation's largest metropolitan areas are continuing to experience the slow suburban growth in the 1980s that characterized the 1970s.* While many of the newer southern and western suburbs have been growing much faster than their central cities, even these differences have become smaller since 1980.

What is new in the 1980s are higher rates of population growth (or lower rates of decline) for the central cities of these large metropolitan areas. Seven of the 25 central cities in this group that lost population in the 1970s (New York, Boston, Paterson-Clifton-Passaic, Indianapolis, San Francisco-Oakland, Portland, and Seattle-Everett) gained during 1980–88. All of the remaining 18 have registered lower average annual declines since 1980.

A clue as to why central cities have rebounded from their 1970s losses can be drawn from the experiences of the nation's oldest industrial centers, those large northern areas that faced population losses in the 1970s. The greatest 1980s gains have accrued to the World Cities and Command and Control Centers among this group. A prime example is New York City, which lost 10 percent of its population during the 1970s, but gained 4 percent between 1980 and 1988. Similar central city gains, or lesser declines, were evident in other northern areas with established advanced service industries (Philadelphia, Boston, Chicago, and Cincinnati).

Twelve metropolitan areas in the South and West differed sharply from the general trend of central-city decline in the 1970s, as both their central cities

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*The large metropolitan areas examined in this section do not conform precisely to the definitions used in previous sections of this *Bulletin*. With the exception of the New York and Paterson-Clifton-Passaic areas, they follow the SMSA definitions used in the 1980 Census and are the 39 areas with 1980 populations exceeding 1 million.[30]

and suburbs grew, in some cases at phenomenal rates. These areas generally have expansive central cities with ample room for development within their corporate limits. Many of them are fairly specialized in their economic functions. These southern cities are San Antonio, Dallas-Fort Worth, Houston, Tampa-St. Petersburg, Miami, and Ft. Lauderdale-Hollywood. The western cities are Sacramento, San Diego, San Jose, Phoenix, Riverside-San Bernadino-Ontario, and Anaheim-Santa Ana-Garden Grove. These metropolitan areas typically grew more slowly in the 1980s than in the 1970s.

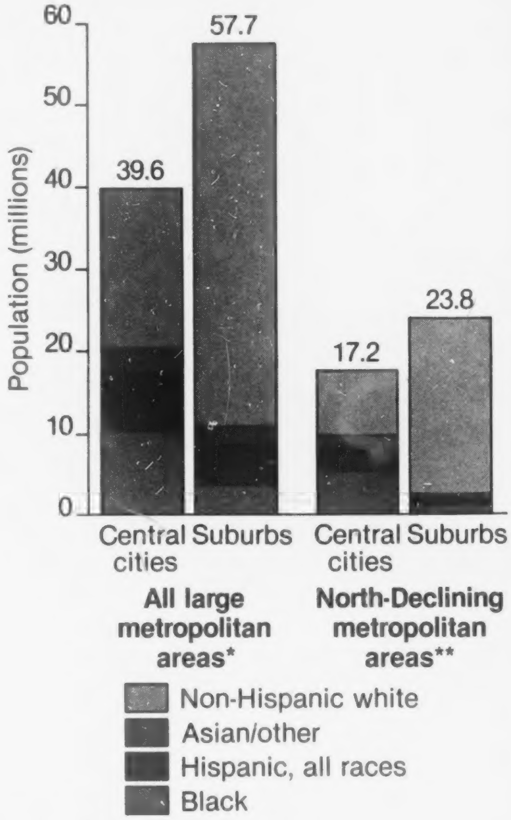
Minorities in Central Cities and Suburbs

The racial composition of today's cities and suburbs is far more diverse than before. The "white flight" to the suburbs of the 1950s and 1960s, coupled with steady black migration to the cities, resulted in suburbs that were primarily white and central cities that were increasingly black. Then, the 1970s saw the beginning of a black suburbanization movement.[31] The Civil Rights Act of 1968 significantly reduced racial discrimination in the housing market. Also, the economic circumstances of many blacks improved at a time when large numbers reached the home-buying age groups.[32]

Certainly, the black suburbanization of the 1970s was not sufficient to erase decades of racial segregation.[33] High levels of community and neighborhood segregation between blacks and whites remained within the suburbs by the end of the decade.[34] Still, the magnitude of black suburbanization in the 1970s far exceeded that of earlier decades.

Also, the rising number of immigrants, particularly Hispanics and Asians, added considerable racial and ethnic diversity to many of the largest central cities and their suburbs. Immigrants tend to settle in central cities. Despite the recent waves of immigrants from Asia and Latin America, Asians and Hispanics as a group have higher rates of suburban residence and neighborhood integration than the black population.[35] Figure 5 shows the central city and suburb distributions of these groups for all large metropolitan areas and for the "North-Declining" areas identified by Frey and Speare.[36]

Figure 5. Racial and Ethnic Composition of Central Cities and Suburbs in Large Metropolitan Areas, 1988



*Defined in footnote, page 33.

**Based on a typology developed by Frey and Speare (see reference 36); North-Declining includes New York, Philadelphia, Boston, Cincinnati, St. Louis, Buffalo, Chicago, Newark, Cleveland, Detroit, Milwaukee, Pittsburgh, and Paterson-Clifton-Passaic.

Source: U.S. Bureau of the Census, public use data files from the March 1988 Current Population Survey.

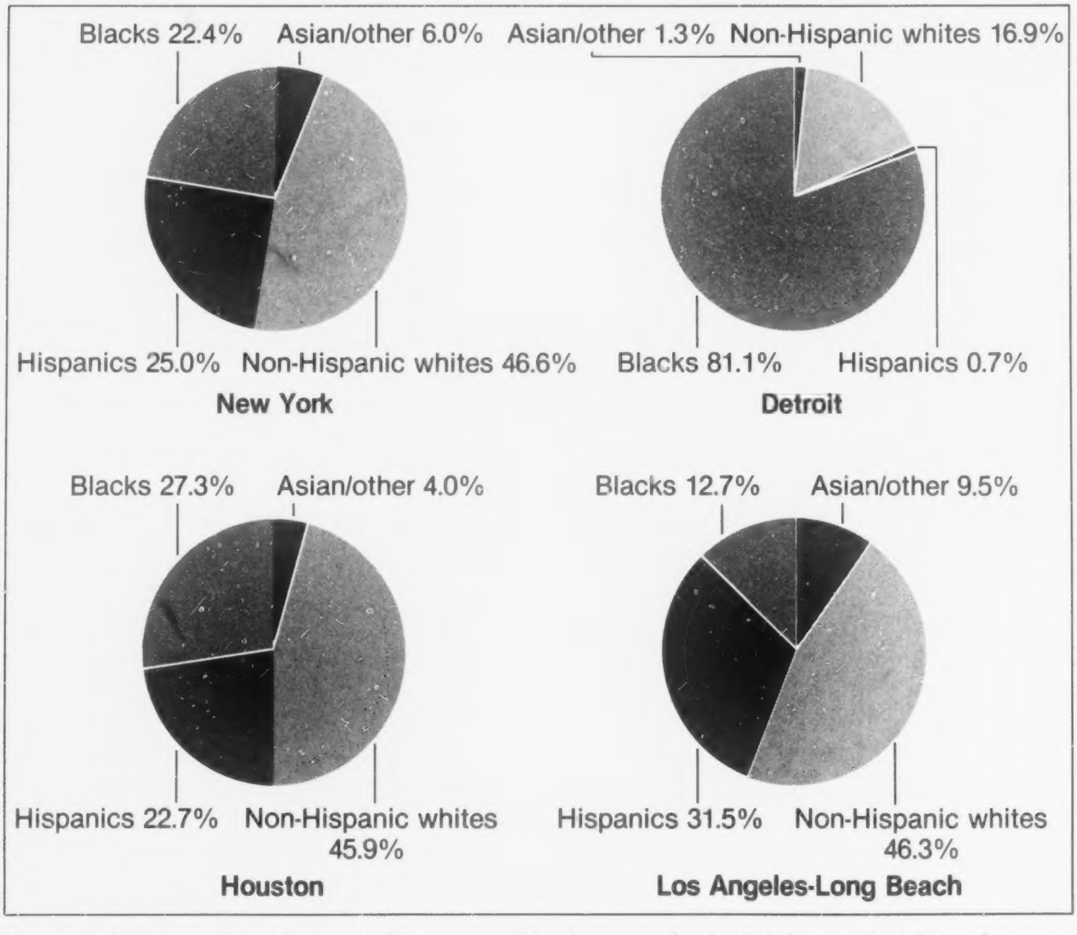
By 1980, within 14 of the nation's largest metropolitan areas, non-Hispanic whites either had already dropped below half of the central city population, or were about to do so. Figure 6 shows the mix of blacks, Hispanics, and Asians in the central cities of four such areas in 1988. In these four central cities, minorities as a group are a majority of the total population, and in Detroit, the black population alone is a majority.

Central City Poverty

The 1970s saw the widespread elimination and relocation of manufacturing employment that used to offer social and economic advancement opportunities for immigrants and minorities in central cities. As employment opportunities available to inner-city minorities dried up, joblessness and poverty rose.[37]

Some scholars have reported a selective out-migration of central city middle- and working-class minorities, leaving behind the more poverty-prone.[38] These trends have given rise to concentrated inner-city poverty areas cut off from mainstream city neighborhoods. Although these "pockets of poverty" are a matter of great concern, there are two misconceptions about city poverty. The

Figure 6. Racial and Ethnic Composition of Selected Central Cities, 1988



Source: U.S. Bureau of the Census, public use data files from the March 1988 Current Population Survey.

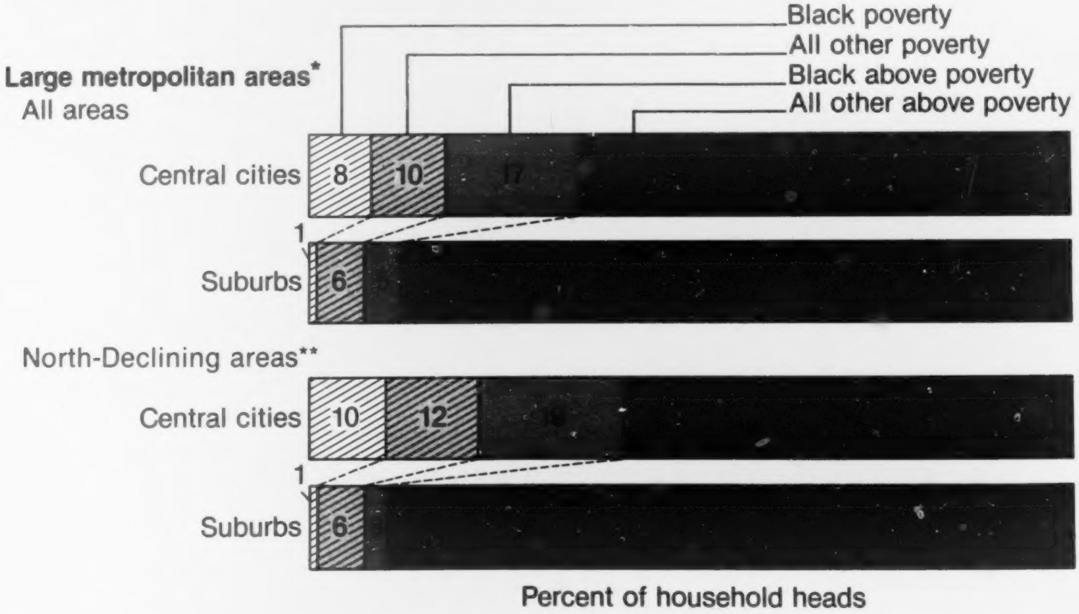
first is that most of the poverty population in the United States resides within the central cities of large metropolitan areas. The second is that a substantial proportion of central city residents are minorities living in poverty.

A careful study of poverty by Bane and Jargowsky indicates that less than 30 percent of the total national poverty population lives in the largest central cities.[39] Some 80 percent of non-Hispanic white poor people live in the suburbs of these large metropolitan areas, in smaller metropolitan areas, and in rural or nonmetropolitan America.[40] Nevertheless, the vast majority of black poverty households are in central cities.

Large central cities are not dominated by black poverty, however. In the central cities of the nation's 39 largest metropolitan areas, for example, the black poverty population represents 7.5 percent of the total population, and the total poverty population represents less than 18 percent of all residents (see Figure 7). Nor are these black poverty households a majority of all black central city households, though the proportion is about one black household in three.

There are alarming pockets of black poverty within large central cities. Bane and Jargowsky estimate that only about 9 percent of poor city whites—but 35 percent of poor blacks—live in concentrated poverty neighborhoods.[41] The social and economic isolation faced by residents of concentrated poverty neighborhoods are leading to severe eco-

Figure 7. Percent of Central City and Suburban Households in Poverty by Race, Large Metropolitan Areas, 1988



*Defined in footnote, page 33.

**Based on a typology developed by Frey and Speare (see reference 36); North-Declining includes New York, Philadelphia, Boston, Cincinnati, St. Louis, Buffalo, Chicago, Newark, Cleveland, Detroit, Milwaukee, Pittsburgh, and Paterson-Clifton-Passaic.

Source: U.S. Bureau of the Census, public use data files from the March 1988 Current Population Survey.

March of Dimes

Since the 1970s, more and more middle-class black families have moved into suburban areas.

nomic and social consequences for these people and their children. The problems are greatest in those cities where there are extensive neighborhoods of minorities and where minorities are a large percentage of all residents. The majority of the nation's concentrated poverty households are located in only about 10 of the largest central cities.

Baby-Boom Suburbanization

One hope held by many people in the 1970s was that as the baby-boom generation reached the household formation ages their preference for settling in the cities would revitalize sagging urban neighborhoods. This hope of "gentrification" was based on the premise that young adults tend to prefer a central city residence, at least until they settle down and have families. Central cities have traditionally served as "staging areas" for young adults before marriage and childbearing.[42]

People also anticipated that the baby boomers, more so than earlier groups, would be likely to stay in the city beyond the early adult years. This expectation rested on the trends of delayed marriage and childbearing and the idea that the cultural amenities and professional employment opportunities located in central cities would appeal to more affluent baby boomers as they aged into their 30s and 40s.

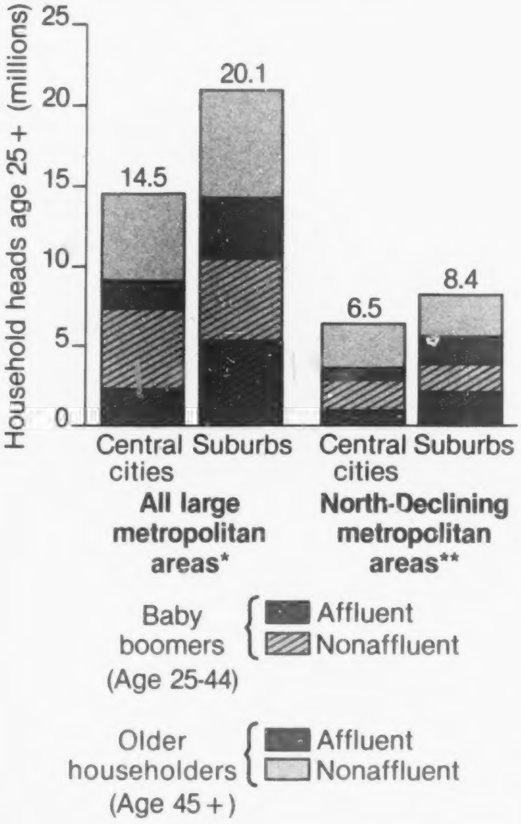
The record of the 1970s suggests that the gentrification trend was less important than had been anticipated.[43] Undoubtedly, the sheer number of baby boomers staved off even greater population declines for central cities than would otherwise have occurred, but as the 1980s ended the majority of baby boomers had already reached their 30s and early 40s, and they are not remaining in the central cities.

Figure 8, page 38, shows that the distribution between cities and suburbs is no different for baby boomers than for older adult households, either for the 39 largest metropolitan areas as a whole or for the 13 large "North-Declining" metropolitan areas.[44] It is the higher-income boomers who are primarily responsible for the greater suburbanization of all baby boomers. Nonaffluent baby boomers are fairly equally distributed between the central cities and the suburbs, but affluent boomers are more than twice as likely to locate in the suburbs than the city. In this respect, the baby boomers also parallel the experiences of older households.

Pockets of gentrification exist within most large central cities and, as suggested earlier, these pockets are more numerous within such cosmopolitan cities as San Francisco and Washington, D.C. But it appears that the baby-boom generation has followed the patterns of earlier generations by moving to the suburbs as they begin to raise their families.

The hope that affluent baby boomers would reinvigorate the nation's largest central cities seems to have evaporated.

Figure 8. Baby Boom and Older Household Heads by Level of Affluence, Central Cities and Suburbs, 1988



Note: Affluence is defined as a household income in the top 30th percentile of all household incomes 1988; nonaffluence is the bottom 70 percent of incomes.

*Defined in footnote, page 33.

**Based on a typology developed by Frey and Speare (see reference 36); North-Declining includes New York, Philadelphia, Boston, Cincinnati, St. Louis, Buffalo, Chicago, Newark, Cleveland, Detroit, Milwaukee, Pittsburgh, and Paterson-Clifton-Passaic.

Source: U.S. Bureau of the Census, public use data files from the March 1988 Current Population Survey.

Conclusion: Beyond the Transition

Throughout most of America's history people have moved from small towns and villages to ever-expanding cities. This growing concentration of the population in metropolitan areas has reflected powerful economic forces. In retrospect, the rural renaissance of the 1970s, which many people thought marked a transition away from metropolitan growth toward a new deconcentration of the population, was not all that it seemed to be at the time. The economic adversity of the 1980s quickly put the brakes on population deconcentration trends, allowing a moderate metropolitan growth to emerge.

Still, the strong metropolitan growth trends of the 1950s and 1960s are not likely to reappear, as the restructuring of the national economy continues and new employment opportunities are created in communities of all sizes. Most certainly, national and worldwide economic restructuring will continue to play a role in shaping America's employment and residential distribution patterns in the future.

As America's production and consumption become increasingly linked to global economic activities, the 1990s will likely bring further vitality to the nation's two major World Cities, New York and Los Angeles. The increased population pressure on already densely settled coastal areas will probably spur the spread of population growth inland—westward beyond the megalopolis on the Atlantic Coast, and eastward into central California and other areas linked to the Pacific Coast.

Such Command and Control Centers as Atlanta and Dallas should also continue to prosper. Many large southern and western metropolitan areas that were hit hard by the rolling recessions of the 1980s will successfully diversify and rebound economically and demo-

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Gentrification, the much-touted salvation of declining urban neighborhoods by affluent baby boomers, was less important than anticipated.

graphically. Immigration from Asia and Latin America will continue to boost the populations of major ports of entry in the 1990s. The large and increasingly mobile elderly population is likely to foster further population gains for fast-growing retirement centers in Florida and other Sunbelt destinations.

The greatest question marks for the 1990s concern the growth prospects of older large "smokestack" metropolises around the Great Lakes, and smaller industrial areas throughout the Midwest. Many of these areas still specialize heavily in less-than-competitive industries. The key to their future growth prospects lies in their capacity to diversify.

The economic forces of the 1980s dealt some sharp blows to nonmetropolitan America. While these negative forces apparently diminished by the end of the decade, it is not certain how quickly these areas can rebound from the economic adversity of this period. If they can, there is the potential for renewed population gain: The strong deconcentration patterns of the 1970s demonstrated that many people prefer the amenities and quality of life offered by smaller communities when economic conditions permit.

If the trends of the past two decades have taught us anything, it is that regional and metropolitan population growth in the United States has become much more volatile and responsive to both local and worldwide forces. The "transition" that has taken place is really the change to a new redistribution process rather than to a specific geographic pattern. Improvements in communication and production technologies, the diffusion of urban amenities throughout the country, and the rise of a global economy have created new distribution dynamics.

Many of the constraints underlying traditional regional and metropolitan growth patterns have been lifted. As a result, the fortunes of metropolitan areas and smaller communities increasingly will be determined by corporate decisions, people's residential preferences and, perhaps most important of all, how effectively areas can adapt to rapidly changing economic conditions. ☐

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Appendix Table: U.S. Metropolitan Areas Ranked by 1988 Population

Size Rank	MSA/CMSA	State(s)	Size (1,000s) 1988	Percent Growth 1980–88	Growth Rank
1	New York-Northern N.J.-Long Island CMSA	NY-NJ-CT	18,120.2	3.3	192
2	Los Angeles-Anaheim-Riverside CMSA	CA	13,769.7	19.8	51
3	Chicago-Gary-Lake County CMSA	IL-IN-WI	8,180.9	3.1	195
4	San Francisco-Oakland-San Jose CMSA	CA	6,041.8	12.6	80
5	Philadelphia-Wilmington-Trenton CMSA	PA-NJ-DE-MD	5,963.3	5.0	172
6	Detroit-Ann Arbor CMSA	MI	4,620.2	-2.8	251
7	Boston-Lawrence-Salem CMSA	MA-NH	4,109.9	3.5	187
8	Dallas-Fort Worth CMSA	TX	3,766.1	28.5	20
9	Washington MSA	DC-MD-VA	3,734.2	14.9	67
10	Houston-Galveston-Brazoria CMSA	TX	3,641.5	17.5	57
11	Miami-Fort Lauderdale CMSA	FL	3,000.5	13.5	75
12	Cleveland-Akron-Lorain CMSA	OH	2,769.0	-2.3	247
13	Atlanta MSA	GA	2,736.6	28.0	23
14	St. Louis MSA	MO-IL	2,466.7	3.8	184
15	Seattle-Tacoma CMSA	WA	2,420.8	15.6	65
16	Minneapolis-St. Paul MSA	MN-WI	2,387.5	11.7	86
17	San Diego MSA	CA	2,370.4	27.3	25
18	Baltimore MSA	MD	2,342.5	6.5	154
19	Pittsburgh-Beaver Valley CMSA	PA	2,284.1	-5.7	273
20	Phoenix MSA	AZ	2,029.5	34.5	14
21	Tampa-St. Petersburg-Clearwater MSA	FL	1,995.1	23.6	35
22	Denver-Boulder CMSA	CO	1,858.0	14.8	69
23	Cincinnati-Hamilton CMSA	OH-KY-IN	1,728.5	4.1	180
24	Kansas City MSA	MO-KS	1,575.4	9.9	107
25	Milwaukee-Racine CMSA	WI	1,571.7	0.1	232
26	Portland-Vancouver CMSA	OR-WA	1,414.2	9.0	125
27	Sacramento MSA	CA	1,385.2	25.9	28
28	Norfolk-Virginia Beach-Newport News MSA	VA	1,380.2	19.0	54
29	Columbus MSA	OH	1,344.3	8.1	131
30	San Antonio MSA	TX	1,323.2	23.4	36
31	New Orleans MSA	LA	1,306.9	4.0	182
32	Indianapolis MSA	IN	1,236.6	6.0	160
33	Buffalo-Niagara Falls CMSA	NY	1,175.6	-5.4	271
34	Providence-Pawtucket-Fall River CMSA	RI-MA	1,125.4	3.9	183
35	Charlotte-Gastonia-Rock Hill MSA	NC-SC	1,112.0	14.5	72
36	Hartford-New Britain-Middletown CMSA	CT	1,067.6	5.3	168
37	Salt Lake City-Ogden MSA	UT	1,065.0	17.0	60
38	Rochester MSA	NY	980.1	0.9	227
39	Memphis MSA	TN-AR-MS	979.3	7.2	144
40	Nashville MSA	TN	971.8	14.3	74
41	Orlando MSA	FL	971.2	38.8	8
42	Louisville MSA	KY-IN	967.0	1.1	220
43	Oklahoma City MSA	OK	963.8	11.9	84
44	Dayton-Springfield MSA	OH	948.0	0.6	229
45	Greensboro-Winston-Salem-High Point, MSA	NC	924.7	8.6	128
46	Birmingham MSA	AL	923.4	4.5	176
47	Jacksonville MSA	FL	898.1	24.3	33
48	Albany-Schenectady-Troy MSA	NY	850.8	1.8	214
49	Richmond-Petersburg MSA	VA	844.3	10.9	94
50	Honolulu MSA	HI	838.5	10.0	106
51	West Palm Beach-Boca Raton-Delray Beach, MSA	FL	818.5	41.9	6
52	Austin MSA	TX	748.5	39.5	7
53	Scranton-Wilkes-Barre MSA	PA	736.6	1.1	224
54	Tulsa MSA	OK	727.6	10.7	96
55	Raleigh-Durham MSA	NC	683.5	21.9	41
56	Allentown-Bethlehem MSA	PA-NJ	677.1	6.6	149

Appendix Table continues

Size Rank	MSA/CMSA	State(s)	Size (1,000s) 1988	Percent Growth 1980–88	Growth Rank
57	Grand Rapids MSA	MI	665.2	10.6	97
58	Syracuse MSA	NY	650.3	1.1	223
59	Tucson MSA	AZ	636.0	19.7	52
60	Las Vegas MSA	NV	631.3	36.3	12
61	Omaha MSA	NE-IA	621.6	6.2	157
62	Greenville-Spartanburg MSA	SC	621.4	9.0	123
63	Toledo MSA	OH	616.5	−0.1	234
64	Fresno MSA	CA	614.8	19.5	53
65	Knoxville MSA	TN	599.6	5.9	162
66	Harrisburg-Lebanon-Carlisle MSA	PA	591.1	6.3	156
67	El Paso MSA	TX	585.9	22.1	39
68	Baton Rouge MSA	LA	536.5	8.6	129
69	New Haven-Meriden MSA	CT	523.7	4.7	174
70	Springfield MSA	MA	522.5	1.4	216
71	Bakersfield MSA	CA	520.0	29.0	18
72	Little Rock-North Little Rock MSA	AR	513.1	8.1	132
73	Charleston MSA	SC	510.8	18.7	56
74	Youngstown-Warren MSA	OH	501.7	−5.6	272
75	Albuquerque MSA	NM	493.1	17.3	58
76	Mobile MSA	AL	485.6	9.5	116
77	Wichita MSA	KS	483.1	9.2	119
78	Columbia MSA	SC	456.5	11.3	89
79	Stockton MSA	CA	455.7	31.2	15
80	Johnson City-Kingsport-Bristol MSA	TN-VA	442.3	2.0	211
81	Chattanooga MSA	TN-GA	438.1	2.7	201
82	Flint MSA	MI	430.7	−4.4	262
83	Lansing-East Lansing MSA	MI	428.4	2.1	208
84	Worcester MSA	MA	415.7	3.2	193
85	Lancaster MSA	PA	414.1	14.3	73
86	York MSA	PA	410.4	7.6	139
87	Saginaw-Bay City-Midland MSA	MI	406.2	−3.6	259
88	Canton MSA	OH	401.4	−0.8	237
89	Augusta MSA	GA-SC	396.4	14.6	71
90	Jackson MSA	MS	396.2	9.4	118
91	Lakeland-Winter Haven MSA	FL	395.8	23.0	37
92	Colorado Springs MSA	CO	393.9	27.3	24
93	Des Moines MSA	IA	391.8	6.6	151
94	Melbourne-Titusville-Palm Bay MSA	FL	388.3	42.3	5
95	McAllen-Edinburg-Mission MSA	TX	387.9	36.9	11
96	Fort Wayne MSA	IN	367.4	3.7	185
97	Davenport-Rock Island-Moline MSA	IA-IL	364.2	−5.3	269
98	Beaumont-Port Arthur MSA	TX	363.9	−2.5	249
99	Shreveport MSA	LA	359.1	7.8	137
100	Corpus Christi MSA	TX	358.0	9.7	111
101	Spokane MSA	WA	356.4	4.3	178
102	Madison MSA	WI	352.8	9.0	124
103	Pensacola MSA	FL	349.9	20.8	46
104	Salinas-Seaside-Monterey MSA	CA	348.8	20.1	49
105	Daytona Beach MSA	FL	348.4	34.6	13
106	Lexington-Fayette MSA	KY	347.9	9.6	113
107	Santa Barbara-Santa Maria-Lompoc MSA	CA	343.1	14.9	68
108	Modesto MSA	CA	341.0	28.3	22
109	Peoria MSA	IL	340.4	−7.0	277
110	Reading MSA	PA	329.1	5.3	169
111	Huntington-Ashland MSA	WV-KY-OH	322.3	−4.2	261
112	Appleton-Oshkosk-Neenah MSA	WI	312.9	7.4	142
113	Utica-Rome MSA	NY	312.6	−2.4	248
114	Atlantic City MSA	NJ	309.2	11.9	85
115	Fort Myers-Cape Coral MSA	FL	309.1	50.6	4
116	Montgomery MSA	AL	300.8	10.3	99

Size Rank	MSA/CMSA	State(s)	Size (1,000s) 1988	Percent Growth 1980–88	Growth Rank
117	Visalia-Tulare-Porterville MSA	CA	297.9	21.2	43
118	Macon-Warner Robins MSA	GA	286.7	8.8	126
119	Rockford MSA	IL	282.2	1.0	225
120	Evansville MSA	IN-KY	281.2	1.8	215
121	Erie MSA	PA	277.0	−1.0	238
122	Eugene-Springfield MSA	OR	270.1	−1.9	244
123	Salem MSA	OR	269.8	8.0	133
124	Brownsville-Harlingen MSA	TX	264.0	25.9	29
125	Poughkeepsie MSA	NY	262.2	7.0	147
126	Charleston MSA	WV	260.8	−3.3	256
127	Sarasota MSA	FL	260.6	28.9	19
128	Binghamton MSA	NY	260.2	−1.2	239
129	New London-Norwich MSA	CT-RI	259.3	3.4	191
130	Fayetteville MSA	NC	255.7	3.5	189
131	Johnstown MSA	PA	250.6	−5.3	268
132	Columbus MSA	GA-AL	246.9	3.2	194
133	Savannah MSA	GA	244.4	10.8	95
134	South Bend-Mishawaka MSA	IN	244.2	1.1	222
135	Provo-Orem MSA	UT	242.7	11.3	90
136	Duluth MSA	MN-WI	241.4	−9.5	281
137	Reno MSA	NV	239.7	23.8	34
138	Killeen-Temple MSA	TX	239.6	11.6	87
139	Huntsville MSA	AL	236.7	20.2	48
140	Springfield MSA	MO	234.3	12.8	79
141	Fort Pierce MSA	FL	231.8	53.3	3
142	Tallahassee MSA	FL	228.6	20.1	50
143	Lubbock MSA	TX	226.8	7.2	145
144	Hickory MSA	NC	222.1	9.6	114
145	Roanoke MSA	VA	221.6	0.5	230
146	Portsmouth-Dover-Rochester MSA	NH-ME	220.4	15.4	66
147	Anchorage MSA	AK	218.5	25.3	31
148	Kalamazoo MSA	MI	217.9	2.6	203
149	Waterbury MSA	CT	215.8	5.3	170
150	Portland MSA	ME	212.2	9.5	117
151	Lincoln MSA	NE	211.6	9.7	112
152	Lafayette MSA	LA	209.6	10.2	101
153	Gainesville MSA	FL	207.6	21.1	44
154	Biloxi-Gulfport MSA	MS	205.0	12.5	81
155	Boise City MSA	ID	200.7	15.9	63
156	Amarillo MSA	TX	196.3	13.0	78
157	Springfield MSA	IL	191.7	2.1	209
158	Green Bay MSA	WI	191.2	9.1	121
159	Ocala MSA	FL	189.8	55.0	2
160	Waco MSA	TX	188.0	10.1	105
161	Bradenton MSA	FL	186.9	25.9	30
162	Yakima MSA	WA	185.5	7.6	138
163	Houma-Thibodaux MSA	LA	183.1	3.5	188
164	Fort Collins-Loveland MSA	CO	182.0	22.0	40
165	St. Cloud MSA	MN	181.2	11.0	92
166	Bremerton MSA	WA	180.9	22.9	38
167	Fort Smith MSA	AR-OK	180.7	11.0	93
168	Chico MSA	CA	174.5	21.3	42
169	Asheville MSA	NC	173.1	7.5	140
170	Lake Charles MSA	LA	172.4	3.1	196
171	Champaign-Urbana-Rantoul MSA	IL	172.1	2.2	206
172	Wheeling MSA	WV-OH	171.5	−7.6	279
173	Cedar Rapids MSA	IA	171.5	1.0	226
174	Merced MSA	CA	170.0	26.3	26
175	New Bedford MSA	MA	167.9	0.7	228
176	Longview-Marshall MSA	TX	166.6	9.8	109

Appendix Table continues

Size Rank	MSA/CMSA	State(s)	Size (1,000s) 1988	Percent Growth 1980–88	Growth Rank
177	Benton Harbor MSA	MI	166.6	−2.8	252
178	Topeka MSA	KS	164.8	6.4	155
179	Muskegon MSA	MI	161.3	2.4	205
180	Clarksville-Hopkinsville MSA	TN-KY	158.9	5.7	164
181	Lima MSA	OH	156.7	1.3	218
182	Olympia MSA	WA	156.6	26.1	27
183	Parkersburg-Marietta MSA	WV-OH	154.4	−2.2	246
184	Tyler MSA	TX	152.6	18.9	55
185	Elkhart-Goshen MSA	IN	151.1	10.1	103
186	Fort Walton Beach MSA	FL	150.6	37.0	10
187	Manchester MSA	NH	149.9	15.9	64
188	Jackson MSA	MI	149.5	−1.3	240
189	Fargo-Moorhead MSA	ND-MN	148.4	7.8	135
190	Waterloo-Cedar Falls MSA	IA	147.8	−9.2	280
191	Steubenville-Weirton MSA	OH-WV	147.7	−9.8	282
192	Richland-Kennewick-Pasco MSA	WA	146.4	1.3	219
193	Medford MSA	OR	145.9	10.1	104
194	Lynchburg MSA	VA	145.5	3.0	198
195	Tuscaloosa MSA	AL	145.4	5.7	165
196	Athens MSA	GA	144.7	11.3	88
197	Monroe MSA	LA	144.0	3.4	190
198	Anderson MSA	SC	143.1	7.4	141
199	Jamestown-Dunkirk MSA	NY	141.3	−3.8	260
200	Redding MSA	CA	139.7	20.9	45
201	Battle Creek MSA	MI	139.2	−1.7	243
202	Naples MSA	FL	138.5	61.1	1
203	Eau Claire MSA	WI	138.4	5.7	163
204	Alexandria MSA	LA	137.8	1.9	212
205	Janesville-Beloit MSA	WI	136.3	−2.2	245
206	Greeley MSA	CO	136.2	10.3	98
207	Joplin MSA	MO	136.0	6.6	153
208	Florence MSA	AL	135.5	0.4	231
209	Decatur MSA	AL	132.7	10.2	100
210	Terre Haute MSA	IN	132.6	−3.4	258
211	Altoona MSA	PA	132.5	−3.0	253
212	Las Cruces MSA	NM	132.0	37.0	9
213	Anderson MSA	IN	131.8	−5.4	270
214	Dothan MSA	AL	131.1	7.0	148
215	Burlington MSA	VT	129.1	12.0	83
216	Mansfield MSA	OH	129.0	−1.6	242
217	Laredo MSA	TX	128.9	29.9	16
218	Pascagoula MSA	MS	128.1	8.6	127
219	Pueblo MSA	CO	127.6	1.3	217
220	Jacksonville MSA	NC	126.5	12.1	82
221	Panama City MSA	FL	125.5	28.4	21
222	Sioux Falls MSA	SD	125.5	14.7	70
223	Lafayette-West Lafayette MSA	IN	125.4	3.0	199
224	Bloomington-Normal MSA	IL	124.7	4.6	175
225	Odessa MSA	TX	124.7	8.1	130
226	Wichita Falls MSA	TX	124.6	2.9	200
227	Charlottesville MSA	VA	123.8	9.0	122
228	Decatur MSA	IL	123.7	−5.9	274
229	Anniston MSA	AL	123.3	3.0	197
230	Sharon MSA	PA	122.4	−4.6	264
231	Abilene MSA	TX	121.8	9.8	108
232	Muncie MSA	IN	120.1	−6.6	276
233	Texarkana MSA	AR-TX	119.4	5.6	166
234	Lawton MSA	OK	119.3	6.1	159
235	Bellingham MSA	WA	118.7	11.2	91
236	Yuba City MSA	CA	118.4	16.1	62

Size Rank	MSA/CMSA	State(s)	Size (1,000s) 1988	Percent Growth 1980–88	Growth Rank
237	Williamsport MSA	PA	118.3	−0.1	235
238	Florence MSA	SC	118.0	7.1	146
239	Hagerstown MSA	MD	117.8	4.1	181
240	Wilmington MSA	NC	117.3	13.4	76
241	Bryan-College Station MSA	TX	116.6	24.5	32
242	Billings MSA	MT	116.4	7.8	136
243	Albany MSA	GA	116.3	3.5	186
244	Glens Falls MSA	NY	116.1	5.9	161
245	State College MSA	PA	115.7	2.6	202
246	Sioux City MSA	IA-NE	115.7	−1.5	241
247	Wausau MSA	WI	113.4	1.9	213
248	Santa Fe MSA	NM	112.5	20.8	47
249	Fayetteville-Springdale MSA	AR	110.6	10.1	102
250	Danville MSA	VA	108.1	−3.3	257
251	Midland MSA	TX	107.3	29.8	17
252	Burlington MSA	NC	105.8	6.6	152
253	Columbia MSA	MO	105.8	5.4	167
254	Bloomington MSA	IN	103.1	4.3	179
255	Sheboygan MSA	WI	103.0	2.0	210
256	Gadsden MSA	AL	102.9	−0.2	236
257	Cumberland MSA	MD-WV	102.4	−5.0	267
258	Rochester MSA	MN	101.0	9.7	110
259	San Angelo MSA	TX	99.3	17.1	59
260	Kokomo MSA	IN	98.9	−4.6	263
261	Fitchburg-Leominster MSA	MA	98.1	4.4	177
262	Kankakee MSA	IL	97.9	−4.9	265
263	Sherman-Denison MSA	TX	97.9	9.1	120
264	La Crosse MSA	WI	95.5	4.9	173
265	Elmira MSA	NY	91.7	−6.1	275
266	Dubuque MSA	IA	90.9	−3.0	254
267	Pine Bluff MSA	AR	90.8	0.1	233
268	Owensboro MSA	KY	87.8	2.1	207
269	Lewiston-Auburn MSA	ME	87.0	2.5	204
270	Iowa City MSA	IA	86.7	6.1	158
271	Bismarck MSA	ND	85.8	7.2	143
272	St. Joseph MSA	MO	85.4	−2.8	250
273	Bangor MSA	ME	84.8	1.1	221
274	Rapid City MSA	SD	82.0	16.6	61
275	Pittsfield MSA	MA	79.3	−5.0	266
276	Jackson MSA	TN	78.2	5.0	171
277	Great Falls MSA	MT	78.2	−3.1	255
278	Lawrence MSA	KS	76.5	13.1	77
279	Cheyenne MSA	WY	75.2	9.5	115
280	Victoria MSA	TX	74.3	7.9	134
281	Grand Forks MSA	ND	70.5	6.6	150
282	Casper MSA	WY	64.7	−10.0	283
283	Enid MSA	OK	58.3	−7.2	278

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Discussion Points

1. Discuss the patterns and timing of population growth in large metropolitan, small metropolitan, and nonmetropolitan areas since 1910.

2. What factors contributed to the slow-down of metropolitan area growth compared to nonmetropolitan areas during the 1970s? Highlight the contribution of international factors.

3. Why did metropolitan areas regain their growth momentum during the 1980s? Did all metropolitan areas participate? Explain.

4. Select a metropolitan area not discussed in this *Bulletin*. Describe its responses to the influences that affected population distribution during the 1970s and 1980s.

5. How did the experiences of the top 20 metropolitan areas between 1970 and 1988 reflect regional shifts in the country's population?

6. How would you expect factors that shaped metropolitan area growth or decline during the past 20 years to correlate with the life cycle changes and settlement patterns of the baby-boom generation?

7. Examine the effects of immigration on the racial/ethnic composition of metropolitan areas. Are all metropolitan areas equally affected?

8. Discuss the impact that actual and potential social, economic and political events worldwide (e.g. perestroika, the growing importance of the Pacific Rim, the debt crisis in Latin America) could have on metropolitan growth in the United States. Use specific metropolitan areas as examples.

Prepared by Kimberly A. Crews

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